# IT Skills: The Business Gain

## Measuring Employees' Efficiency after e-Skills Training & Certification

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# Contents

## Executive summary

This survey has been carried out by the Applied Research & Innovation Department of ALBA Graduate Business School and it serves several objectives. Firstly, it aims at generating new knowledge regarding the cost of IT ignorance for organizations in Greece. Secondly, it measures the increase in efficiency, motivation and productivity after e-skills training and certification. Thirdly, it identifies main IT skills training strategies in Greek companies. Fourthly, it aims at shedding light to the perceptions of Human Resources Directors and Training Managers on IT skills training and certification. The findings of the survey suggest that the cost of IT ignorance in Greek companies is considerable high and can be reduced if employees receive training and certification on IT skills. Employees'

performance on OFFICE applications can improve significant after a month's training and certification. Time spent by employees and their supervisors to solve OFFICE related difficulties was decreased considerable too. Improved performance was positively reflected on the employee's and supervisor' perceptions concerning their job satisfaction, organizational loyalty, employability in the job market, relations with colleagues, career opportunities within the organization. Last but not least, the findings suggest that although HR managers seem to overall appreciate the positive influence that IT training and certification has on employee's performance, they do not prioritize so far training and certification on such skills.

# 1. Introduction

Over the last 2 years businesses in Europe experienced (and they still do) the effects of the financial crisis that burst in USA in mid 2007. At a European level, the economy nowadays is in the deepest recession since the 1930s. Europe's economic future and more specifically enterprises' viability depends at a high level on their ability to become a knowledge and innovative economy. Towards this direction the European workforce should be able to actively participate in the globalized labor market and to deal with the increasing demands of technology and business requirements. For this reason, ICT skills should be of priority, not only for the EC policy but for the enterprises agenda as well, in order for them to be competitive in the global economy.

What makes this survey well-timed is the growing demand for highly-skilled ICT practitioners and users in EU. It is critical for the success of European industries to re-skill Europe's workforce for the needs of the knowledge-based economy. Both innovation and the uptake of ICTs have been given high priority in the renewed Lisbon agenda that sets the EU's strategy for creating growth and jobs in a sustainable manner. The success of the Lisbon strategy, the competitiveness of European industry and social cohesion appear to be dependent on the availability and the effective use of ICTs and the knowledge, skills, competences and inventiveness of the European workforce and citizens.

# 2. Previous research in the field- The European perspective

Several studies have been published concerning ICT skills, in order to gather evidence and explore possible actions with a view to design a coherent and consistent long-term e-skills strategy. In 2005, a report on the supply and demand of e-Skills in Europe was released, which analyzed the evidence, both qualitative and quantitative, on the supply and demand of e-Skills in Europe over the period 1998-2006[1]. A CEN Workshop Agreement was published in 2006, covering a state-of-the-art review of progress in ICT practitioner skills frameworks in the EU[2]. In 2006, the Commission also established an e-Skills and e-Learning expert group in order to help designing a long-term e-Skills agenda.

Furthermore, a survey[3] commissioned by Microsoft that was conducted in September and October 2009 in 1370 organizations in 13 European Union countries showed that the recent financial crisis has increased the need in order to lower the gap between the e-skills and the labor market demand. Moreover, according to the same survey there is a clear need to re-skill the existing workforce within the enterprises as in five years' time less than 10% of jobs will require no ICT skills at all. The first European e-Skills Week, taking place 1-5 March 2010, aims to raise awareness of the growing demand for highly skilled ICT practitioners and users within the industry[4]. It promotes the idea that today more than ever, e-skills and computer literacy are a competitive advantage on the job market.

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[1] Source: "Enterprise and Industry"
[2] Source: "Enterprise and Industry"
[3] Post Crisis: e-skills are needed to drive Europe's innovation society
[4] "eSkills Week major campaign to improve ICT skills in Europe"

Despite the increased demand for skilled ICT practitioners, Europe is, at the same time, facing an "e-Skills gap", a serious and increasing undersupply of ICT practitioners in the market[5]. As statistics show, concerted action is needed, as digital illiteracy and the digital divide persist. 7% of the EU population has no computer skills whatsoever and more than 60% of people, not educated beyond lower secondary level, have no basic e-skills[6]. This comes as no surprise, considering that 51% of companies operating in Europe have difficulties in recruiting personnel with ICT skills[7]. 70 % of personnel with required skills in the use of ICT applications appears to be not entirely suitable.

Germany has only little more than half the number of Science/Maths/Computing graduates than the United Kingdom, and only two thirds of the figure in France[8]. Poland has 250 annual graduates in this field per 1000 IT specialists in the workforce – while the Netherlands produce only 32 per 1000.

With regards to Greece, figures are also disappointing. 51% of the population has access to a PC, 44% of them use the Internet, while approximately only 20% of PC users actually have a broadband connection[9]. Between the years 2005-2009, the average annual increase in PC users is 13.6% whereas in Internet users it comes to 17.4%. It is interesting to note that 40.1% of users hold basic education, while 25% of them have higher education[10].

According to the Recruitment Confidence Index 2010, Human Resources Managers and Recruitment Managers prefer candidates with advanced or basic IT skills (see following graph)[11]. Companies prefer to recruit employees for most of the jobs who already have some IT skills.

[5] "Monitoring e-Skills Demand and Supply in Europe. e-Skills shortages and statistics caveats – a first wrap-up of reactions"

[6] "Individuals who have never used the Internet"
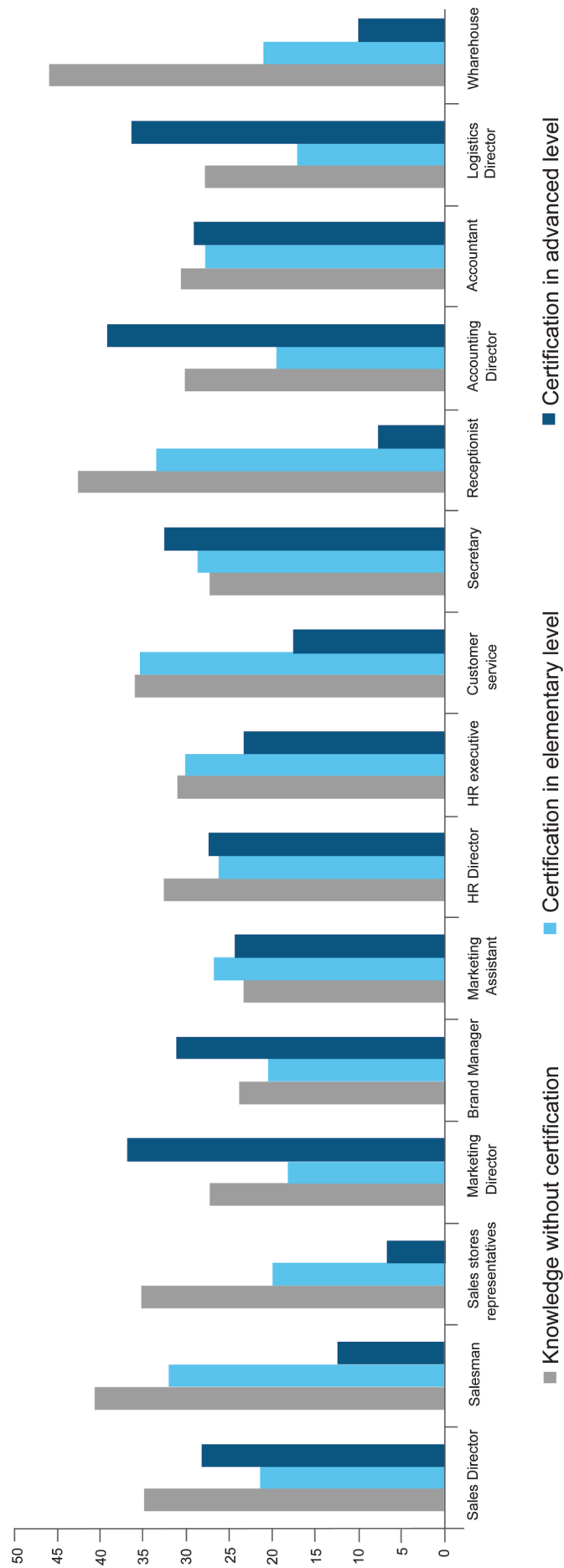
[7] "Digital Literacy and ICT Skills"

[8] "Monitoring e-Skills Demand and Supply in Europe. e-Skills shortages and statistics caveats – a first wrap-up of reactions"

[9] Observatory of Information Society, 2010

[10] "Research of ICT usage among Greek households: Year 2009"

[11] "Recruitment Confidence Index", http://www.alba.edu.gr/RCI/Documents/RCI_Report_2010_A.pdf

Graph 1: **Preferred IT skills level per function by Recruiters**

- Certification in advanced level
- Certification in elementary level
- Knowledge without certification

Eurostat figures indicate the demand to reach 250,000 skilled ICT workers by 2010. The last RCI survey carried out by the Applied Research and Innovation department within ALBA Graduate Business School has showed that ICT-related skills are a prerequisite for recruitment[12]. However, only 180,000 skilled ICT workers are likely to be available by 2010. While the economic downturn may overwrite these trends, the long-term trend of a shortfall may threaten job opportunities and Europe's competitiveness in the globalised world.

While we have a lot of information regarding the e-Skills gap in Europe, there is little evidence on how much this cost for the company at a national and international level. Past research carried out in Italy has measured the cost of ignorance for Italian companies and the impact of training on the performance of individuals. In 2003 AICA, jointly with Bocconi University, carried out a research on the "cost of digital ignorance", concerning the Italian market. It monitored the demand on ECDL graduates (the main ICT certifying authority in Italy) and their profile in the public and private sector. The main outcomes of the survey regarding the cost of IT ignorance are summarized below:

Which assumptions have been made in order to roughly evaluate the cost of ignorance in the Italian market?

- ✔ The number of generic users, in Italy, amounts to 6.700.000. Researchers took into account only generic users because they assumed that heavy users are more skilled and waste less time in computer problems.

- ✔ The time lost per week has been multiplied **by the number of generic users** 2h 51 min x 6700000= 19095000 hours per week

- ✔ and then **by the number of working weeks** per year 19095000hours x 48 weeks =916560000hours = 114.570.000 working days

- ✔ So, every year, more than one hundred millions working days are lost for lack of adequate skills.

- ✔ By considering the **daily average cost per employee**, in Italy, (136,6 €) there is an indication, in monetary terms, of the cost, to Italian economy, of IT ignorance equal to 136,6€ x 114.570.000 = 15,6 billion €

- ✔ It was also given an estimate of the annual cost per generic user 2h 51 min x 48 week = 17,1 days per year, 136,6€ per day x 17,1days = 2331€

In the following table the Italian survey concluded on the main cost of IT ignorance as well as the percentage of improvement in skills and competencies and the time saved per year after users get a basic IT training and certification. So the return on investment in training, per person, can be yearly estimated around 2261€ (Productivity gain 1967€ + Reduction of hidden costs 291€ = 2261€)[13]

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[12] "Recruitment Confidence Index report", http://www.alba.edu.gr/RCI/Documents/RCI_Report_2010_A.pdf
[13] Fulvia SALA, AICA, "A survey of ECDL "graduates" in Italy"

| The Cost of Ignorance | | | |
|---|---|---|---|
| R.O.I. | | | |
| Items affected by training | Min. lost per week | Competence improvement | Saved time (min) |
| Help others | 38 | 20% | 7,6 |
| Printing problems | 22 | 13% | 2,86 |
| Waiting for help | 22 | 20% | 4,4 |
| Internet access | 13 | 16% | 2,08 |
| Problems with mail | 12 | 16% | 1,92 |
| WP problem | 11 | 24% | 2,64 |
| *Minutes / week* | *118* | *18%* | *21,5* |

*Hours / year = 17,2* ⇨ *Days / year = 2,15* ⇨ *294 € / year*

## 3. Research objectives

The current survey aims at measuring the cost of IT ignorance for an organization **in Greece**. Currently, the Greek market lacks such a survey that would enable companies to:

- ✓ identify how employees handle IT related difficulties

- ✓ figure out the cost of digital ignorance for their employees

- ✓ appreciate the importance of digital training

- ✓ measure their ROI of IT training

- ✓ invest in IT education

Furthermore, the survey identifies the time that employees spend trying to solve IT queries due to lack of relevant skills and how much time their supervisors spend trying to help them.
In addition, the survey looks into the methods that employees use to solve IT difficulties.
The cost of digital ignorance is measured per employee both on a weekly and annual basis.

Companies can then estimate the cost of digital ignorance and decide on the financial benefits achieved, whether they invest in IT education or not.

The steps followed in this survey are described below:

1. Employees' skills were assessed before they receive any formal training through a mock test (ECDL Expert for WORD, Excel, Powerpoint and Access) prepared and carried out by ECDL Hellas.

2. ECDL Hellas provided the training to candidates for a month and the opportunity to sit the ECDL exams and certify their skills.

3. Following this, we were able to measure the improvement on IT skills by comparing the test results before and after training and certification as well as the time spent by employees and supervisors to solve OFFICE related queries before and after training and certification.

The survey goes a step further to identify additional value added by IT training with regards to increase in overall performance, efficiency, motivation and productivity of employees, after they receive formal training and certification. In other words, we do not only explore the immediate cost benefits of improving IT skills of employees, but we also study their perceptions in relation to job satisfaction, organizational loyalty, relations with colleagues, employability in job market and career opportunities.

In addition, the current survey explore the perceptions of supervisors and IT directors regarding the value of IT training and shed light to their understanding of digital knowledge their employees hold. Are supervisors aware of their subordinate's IT skills or lack of skills? Do they underestimate their skills, thus missing

opportunities or overestimate their skills and therefore ignoring the real cost of digital ignorance. What is more, the survey identifies the cost of IT department in order to help employees to solve OFFICE related queries. In relation to that, the survey explores the perceptions of HR managers on IT skills training and certification. Do they consider it important and invest on IT personnel and IT education or disregard its importance?

By addressing these issues, the survey attempts to give an overview of the Greek market with regards to the cost of digital ignorance for organizations, the perceptions of IT and HR managers on training and certification training,  as well as the relation between training and certification and employees' job satisfaction, motivation, performance, career opportunities and employability in the job market.
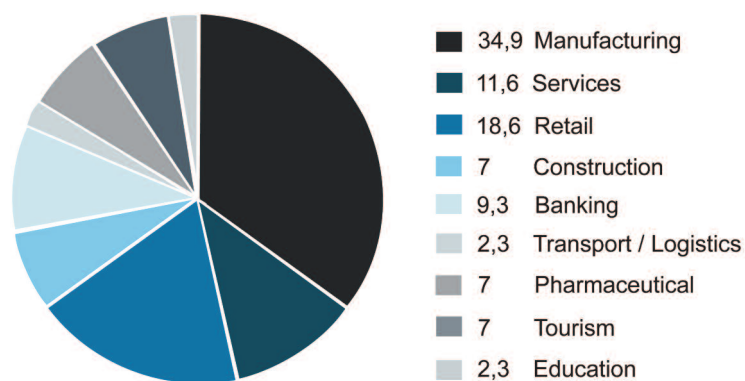
# 4. Research Design

This section explains how the research survey
has been designed and carried out. In total, 44 companies participated in our research, as shown in the following table:

Table 1: **Participating companies**

| Participating companies | | | | | | |
|---|---|---|---|---|---|---|
| ADIDAS | BOLD OGILVY | EUROBANK | ISOMAT | LEROYMERLIN | PERFETTI VAN MELLE | THE SWATCH |
| AIG | CADBURY | EVGA | JOHNSON DIVERSEY | MAC DONALDS | PISCINES IDEALES | VIVARTIA |
| ALBA | CRETA FARM | FRIGOGLASS | KANTOR | MILLENNIUM BANK | REGENCY | EAB |
| ALDEMAR | DELOITTE | GLAXO | KORRES | OLYMPIC DDB | ROCHE | ΕΛΛΗΝΙΚΑ ΚΑΛΩΔΙΑ |
| AMVIS | ELMEC SPORT | IMPERIAL TOBACCO | KOSMOCAR | OPEN24 | S&B | EMA |
| ASTRA ZENECA | ELPACK | INTRACOM | LDK | PAPPAS ANELKYSTIRES | SUPERFAST FERRIES | IKEA |
| KEΘEA | TITAN | | | | | |

The participating organizations cover **9** different industries as the following graph shows with almost 1/3 of the companies coming from the manufacturing sector.

Graph 2: **Industry distribution**



| | |
|---|---|
| 34,9 | Manufacturing |
| 11,6 | Services |
| 18,6 | Retail |
| 7 | Construction |
| 9,3 | Banking |
| 2,3 | Transport / Logistics |
| 7 | Pharmaceutical |
| 7 | Tourism |
| 2,3 | Education |

From each company, **3** candidates have been chosen, on average, from junior level to middle management. In total, **140** candidates, **140** supervisors, **43** HR managers and **41** IT directors participated in our research. The research was carried out in two stages. During the first stage, in June 2009, **26** WORD candidates, **60** EXCEL candidates, **40** POWERPOINT candidates and **14** ACCESS candidates were given questionnaires in order to evaluate their skills and training needs before the whole training and certification process begins. **26** WORD supervisors, **60** EXCEL supervisors, **40** POWERPOINT supervisors and **14** ACCESS supervisors were also given questionnaires to evaluate their employees' skills and training needs. In addition, Human Resources Managers or Training Managers who were the contact persons per each enterprise also filled in questionnaires, in order to explore the policies of the companies concerning IT training and certification and how they are valued within their organizations. IT directors also completed questionnaires, in order to measure the overall cost of IT ignorance and gave data concerning the number of IT employees as well as the number of hours spent in order to assist the staff in solving IT queries and difficulties. In September 2009, candidates participated in a mock test organized by ECDL Hellas to assess their skills. **3** candidates successfully passed the test and did not receive any further training. In the second stage of the research, which began in October 2009, **137** candidates received formal training by ECDL Hellas on ECDL Expert (Word, Excel, Powerpoint & Access) in collaboration with more than 10 Training Centers in Athens, Thessaloniki and Patras for one month on either WORD/EXCEL/POWERPOINT/ACCESS applications. **21** candidates for various reasons did not complete the training process and gave up. **116** candidates finally took the ECDL test to certify their skills. **84** candidates successfully passed the exam and **32** candidates failed. Success rates per application are: WORD: **76.2%**, EXCEL: **72.3%**, POWERPOINT: **75%**, ACCESS: **66%**. In December 2009, successful candidates and supervisors completed the **second questionnaire**, not only to explore the increase in efficiency after training and certification, but also to study the influence on organizational behavior and career opportunities. 21 WORD candidates, 48 EXCEL candidates, 30 POWERPOINT candidates and 12 ACCESS candidates completed the second questionnaire. In addition, 21 WORD supervisors, 48 EXCEL supervisors, 28 POWERPOINT supervisors and 12 ACCESS supervisors filled in the 2nd questionnaire. Data analysis took place in January-February 2010.

## 4.1 Users' profile

The following graph shows the gender of candidates, the percentage of women and men participated in our research per application. The majority of participants were female, with the exception of ACCESS, in which the majority of participants were male.

Graph 3: **Gender distribution per application**
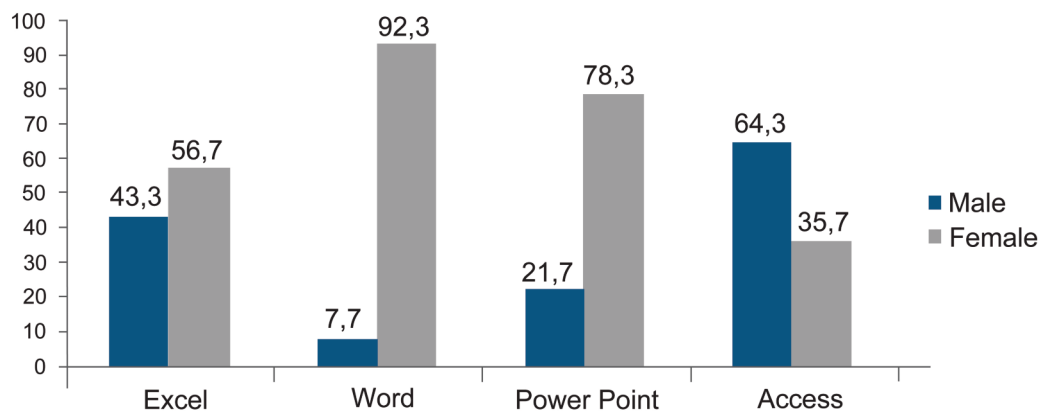


The following graph presents information regarding the age of candidates per application. We grouped candidates into three age groups, those candidates that are under 30 years old, those between 31 and 45 years old and candidates that are older than 45 years old. The majority of the participants were up to 45 years old whereas in both PPT and Access no participant was over 45 years old.

Graph 4: **Age distribution per application**
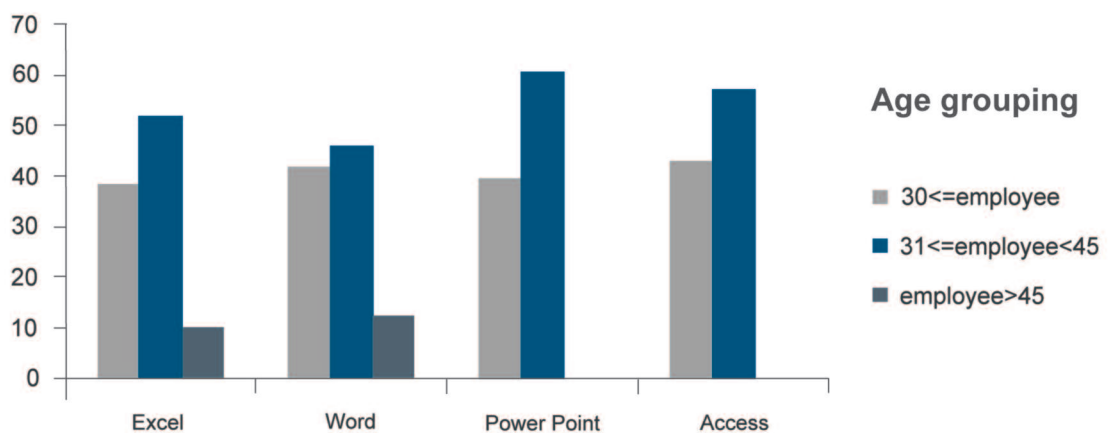
## 4.2 Questionnaire design

In total, 4 different types of questionnaires (candidate, supervisor, HR and IT) were designed in order to capture each group's perceptions concerning the use of the Office applications as well as the necessary data in order to evaluate each company's performance concerning IT skills and training. More specifically, 8 questionnaires (1 for each application) were developed for both the candidate and the supervisor. The analysis for each questionnaire follows. In total, the questionnaires developed were the following:

1. Two questionnaires for Candidates (one before training and one after training and certification)

2. Two questionnaires for Immediate Supervisors (one before training of their subordinates and one after training and certification)

3. One questionnaire for HR Manager

4. One Questionnaire for IT Manager

### 4.2.1 Candidate's questionnaire

Each candidate was given a questionnaire customized on the specific application the person uses mostly at his/her work. Before training and certification, **26** candidates that mostly use WORD were given a questionnaire asking specific questions on the use of WORD application. **60** candidates that mostly use EXCEL were given appropriately customized questionnaires. **40** candidates that use POWERPOINT application were also given customized questionnaires. **14** candidates were given questionnaires customized on the use of ACCESS.

At this stage of the research, the questionnaires were given to candidates, with the overall aim of identifying how much time candidates spend dealing with OFFICE related queries and how they handle these queries.

At the beginning, respondents gave demographic information with regards to their gender, age, position in the company. Candidates were asked whether they have received training on IT so far. Then, candidates were asked to evaluate their skills on the use of OFFICE in general and specifically on the use of either WORD/EXCEL/POWERPOINT/ACCESS. Candidates were then asked to report how many hours they spend, on a daily basis, on the use of either WORD/EXCEL/POWERPOINT/ACCESS. A question followed regarding "how candidates handle OFFICE difficulties", in which respondents were given a number of choices, including:

i) Find solution myself
ii) Ask a colleague
iii) Use help function
iv) Search internet
v) Ask IT help desk
vi) I ignore it

Then, candidates were asked to report how much time they spend on a weekly basis, to solve either WORD/EXCEL/POWERPOINT/ACCESS difficulties. Moreover, participants were also asked how many years they have been using either WORD/EXCEL/POWERPOINT/ACCESS. In addition, they were asked to state their views whether they need training on the use of either WORD/EXCEL/POWERPOINT/ACCESS difficulties. Finally, they were asked to specify the fields in which they feel they need further training (e.g. Insert headers and footers, Insert page numbers, Preview pages before printing, Insert a table, Create a mail merge, Insert graphics).

### 4.2.2 Supervisor's questionnaire

Participants' supervisors were also given questionnaires before training and certification, in which they were asked to give their perceptions concerning the skills and training needs of candidates.

Questionnaires were given to:

- 26 supervisors of WORD candidates
- 60 supervisors of EXCEL candidates
- 40 supervisors of POWERPOINT candidates and
- 14 supervisors of ACCESS candidates

Specifically, they were asked to comment on the number of years they supervise each candidate. They were also asked to evaluate the candidate's skills on the use of either WORD/EXCEL/POWERPOINT/ACCESS, depending on the application the user mostly works on. Supervisors were also asked to consider whether the candidate needs further training on the use of either WORD/EXCEL/POWERPOINT/ACCESS and to specify certain fields (e.g. Create a table, Design and run queries in the case of ACCESS). In addition, supervisors were asked whether the candidate has requested additional training on either WORD/EXCEL/POWERPOINT/ACCESS. Then, supervisors were asked whether the candidate asks them for help/advice when he/she faces difficulties with the specific application and how often this occurs on a weekly basis. Finally, supervisors were asked whether they believe training can enhance the candidate's sense of job satisfaction, relations with colleagues, commitment to organization, competitive position in the market, career opportunities in the organization.

### 4.2.3 HR manager's questionnaire

In total, **43** questionnaires were answered by HR managers. They, initially, provided some information about the name, website, industry in which, the company operates. HR managers were, then, asked to give quantitative information regarding the number of employees, users of OFFICE applications, training cost on an annual basis and finally the annual training cost on IT applications. Another question concerned the ECDL certification and whether it is popular among employees. HR managers were then asked if there are any company plans to invest on training that would lead to ECDL certification or other certification in the future. The next question was about the importance of IT training for the company, whether it is planned or randomly occurring, connected to employees' development plans, whether it is considered as a tool to improve quality/IT use and public image of the company. Another question explored the value that the IT training has given to the company (productivity increase, cost reduction, job rotation, error reduction, job satisfaction, service quality improvement, company's public image improvement). The final question aimed to explore why companies do not invest on IT training (possible cost, low importance, lack of interest, lack of appropriate certification programs, other priorities).

### 4.2.4 IT Manager's

**41** Information Technology managers participated in our research. In the questionnaires given to them, they provided quantitative information on the number of IT users in each company, as well as on the number of users that mostly use OFFICE applications between the years 2006-2009. IT managers were also asked to provide quantitative information regarding the number of users that have basic and advanced or certified IT skills.

They were also asked to provide some demographic information with regards to the types of job users hold within the organization, namely: secretaries, professionals, technicians, directors or other. Another question concerned the number of people using specific applications, either WORD/EXCEL/POWERPOINT/ACCESS, email, Internet. IT managers were also asked to give information on the IT infrastructure of the company, such as number of servers, desktops, laptops, internet users, bandwidth speed. Also, another question explored the types of networks, access to the internet for all employees, intranet, and website of the company. Finally, they were asked to give information about the cost of IT investment, the cost of IT personnel, number of people working in the IT department, number of hours spent dealing with OFFICE related queries, as well as they type of queries they receive.

All questionnaires are presented in Annex 1 page 53.

## 5. Data Analysis

This section presents the findings of the survey. It analyzes all the results of the research survey as well as the perceptions that both candidates and supervisors gave. The analysis has been carried out for both the two stages of the research: before and after the training certification.

## 5.1 Analysis of the questionnaire given to candidates before ECDL training and certification

When asked to evaluate their performance on WORD, **11.5%** only of respondents admitted having problems with the use of the specific application. **73%** of them though, performed poorly (score up to 30%) in the mock test. The following graph clearly shows that the participants overestimated their skills concerning WORD application, as 23 out of 26 achieved a lower score from what they thought they were able to do.

Graph 5: **Mock test results compared to candidates' perceptions on WORD**
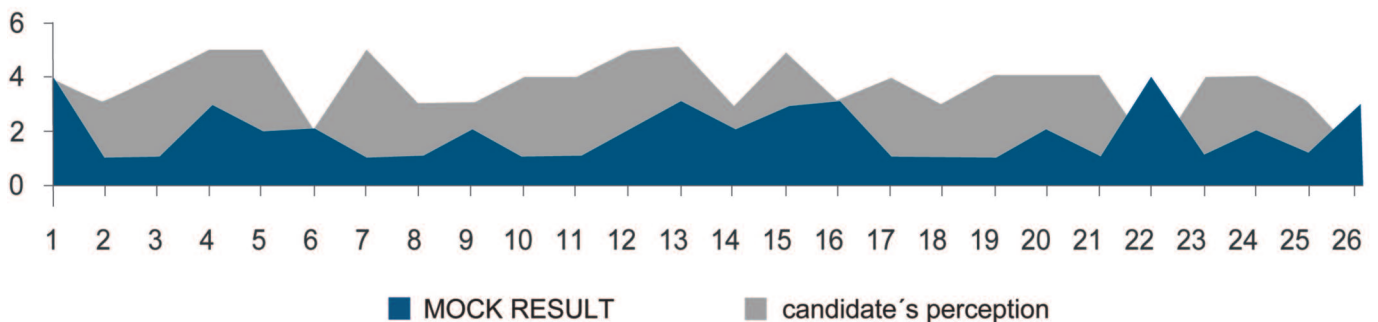


It is interesting though to compare the perceptions of supervisors with the mock test results of the candidates. Around **15%** only of supervisors evaluated poorly the skills of their employees. Given the low performance in the mock test, this reveals a serious lack of knowledge regarding the skills of their subordinates. The two previous graphs show a **clear gap** for both candidates and supervisors concerning their perceptions and what the employees actually perform.

Graph 6: **Mock test results compared to supervisors' perceptions on WORD**
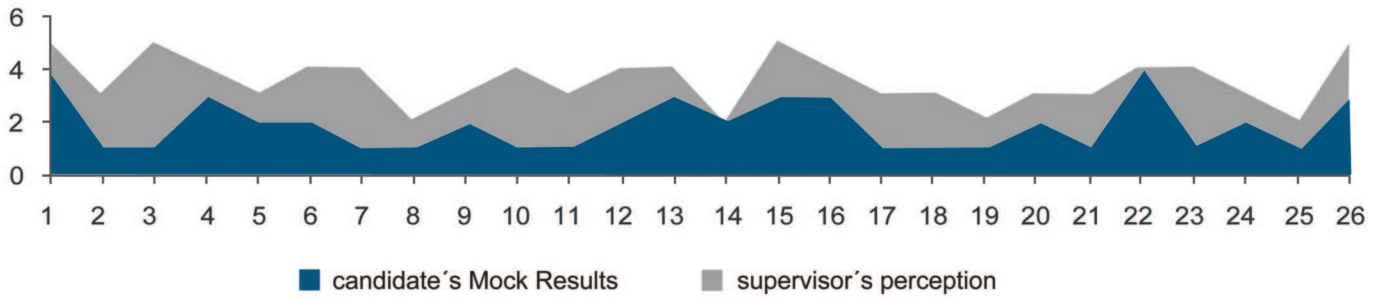
Respondents/users of EXCEL tend to overestimate their skills too. Around **20%** of the candidates consider that their skills are below average, while the vast majority performed rather poorly in the mock test.

Graph 7: **Mock test results compared to candidates' perceptions on EXCEL**
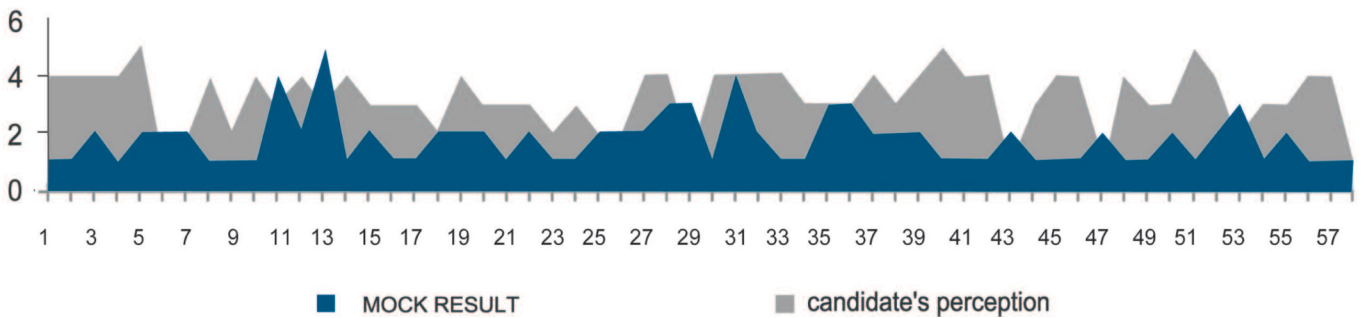


Regarding the supervisors' views, almost **28%** consider the skills of their employees low on the use of EXCEL. Given the low performance in the mock test, **the lack of accurate evaluation is rather high**, as the graph below reveals.
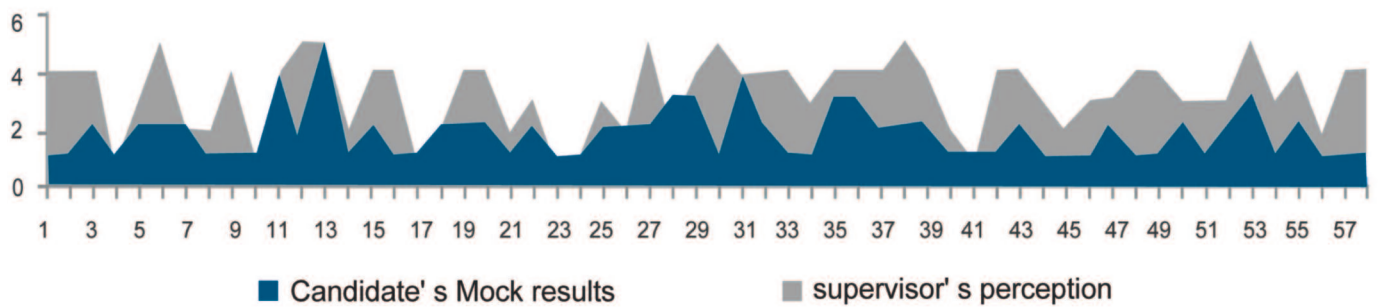
More than half the respondents/users of POWERPOINT, overestimate their skills.As the mock test revealed they performed considerably lower compared to their perceptions. However, almost **26%** of respondents/users of POWERPOINT performed better than they actually believe they would do. Overall, results suggest that respondents are not aware of their skills and either overestimate or underestimate their performance, as the graph below shows.

Graph 9: **Mock test results compared to candidates' perceptions on POWERPOINT**
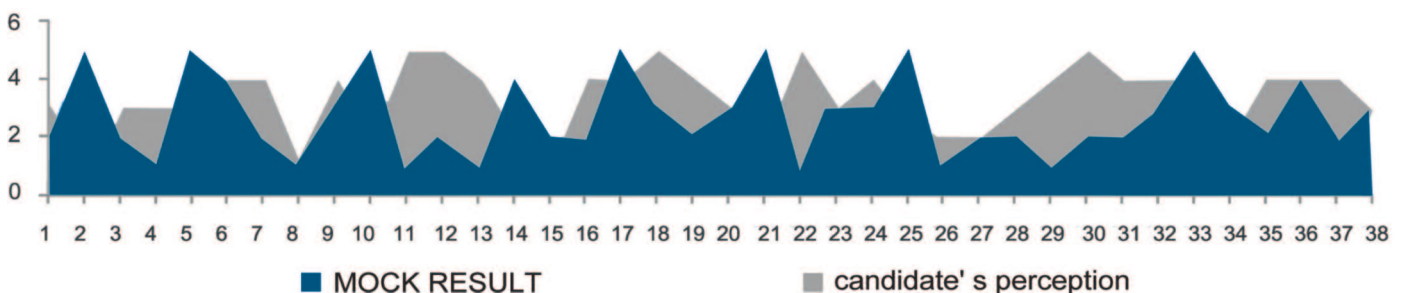


Our results suggest that supervisors also lack a clear picture of their employees' skills on the use of POWERPOINT (see graph 10). More than **50%** of the supervisors overestimate the skill of their employees while almost **26%** of the supervisors underestimate the performance of their people on POWERPOINT.

Graph 10: **Mock test results compared to supervisors' perceptions on POWEPOINT**
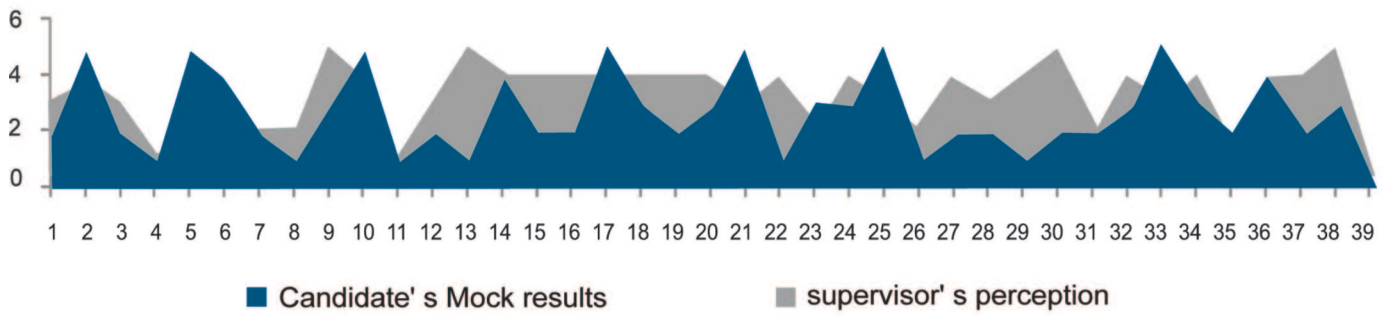


When asked to evaluate their performance on ACCESS, **50%** of the respondents considered that they possess moderate to high skills. The other half evaluated poorly their skills. Overall, respondents performed considerably low in the Mock test, as the graph below shows.

Graph 11: **Mock test results compared to candidates' perceptions on ACCESS**
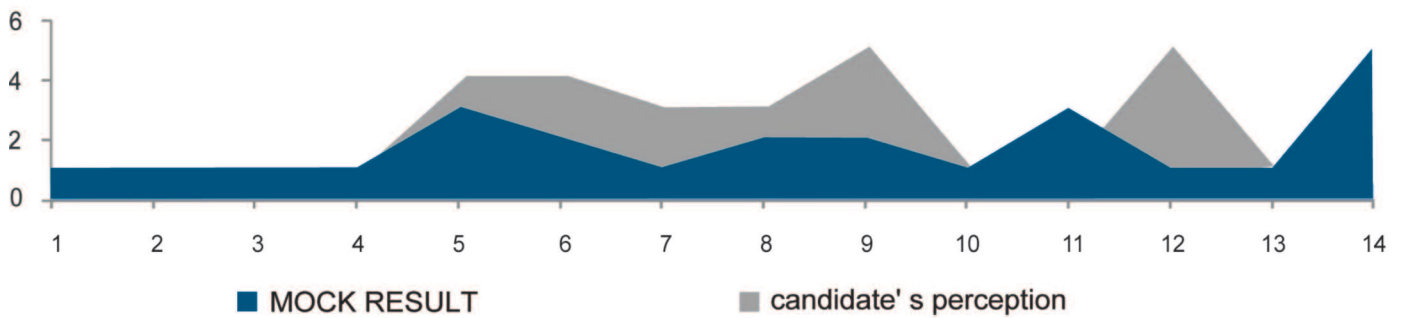


It is interesting to notice that almost **50%** of supervisors also overestimate the skills of their subordinates, as the following graph shows.

Graph 12: **Mock test results compared to supervisors' perceptions on ACCESS**



■ Candidate's Mock results          ■ supervisor's perception
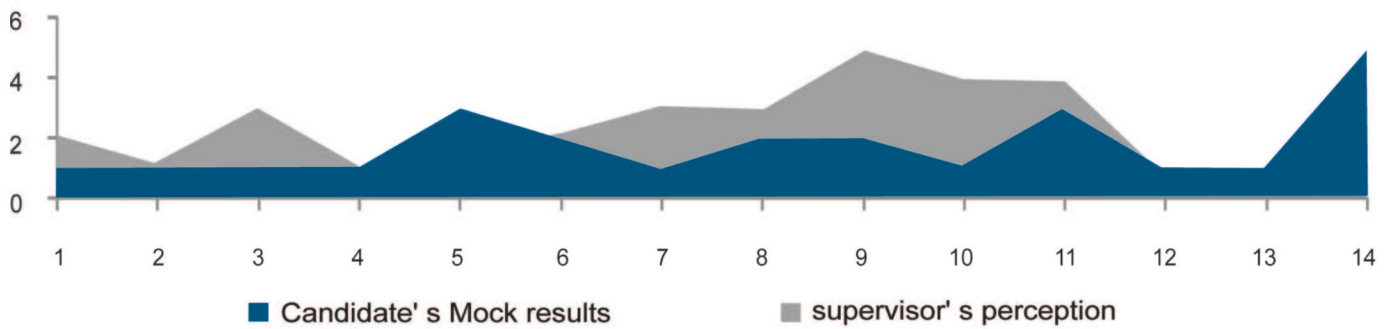
Regarding the question "*how candidates handle OFFICE difficulties*", respondents were given a number of choices, including:

vii) Find solution myself
viii) Ask a colleague
ix) Use help function
x) Search internet
xi) Ask IT help desk
xii) I ignore it

Moving now to each application, **53.8%** of respondents that use WORD try to find a solution themselves. **34.6%** of respondents would ask their colleagues for help. **7.7%** of respondents use the help function, while **3.8%** of respondents would ask the IT help desk. Graphically, this information is shown below.
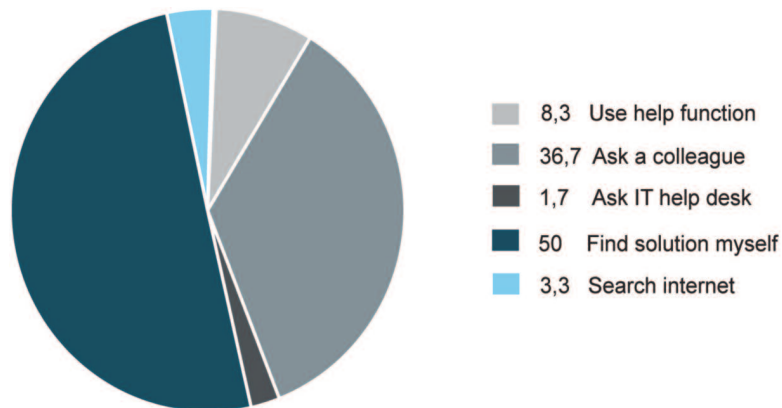
Graph 13: **How candidates handle WORD difficulties**



7,7   Use help function
34,6  Ask a colleague
3,8   Ask IT help desk
53,8  Find solution myself
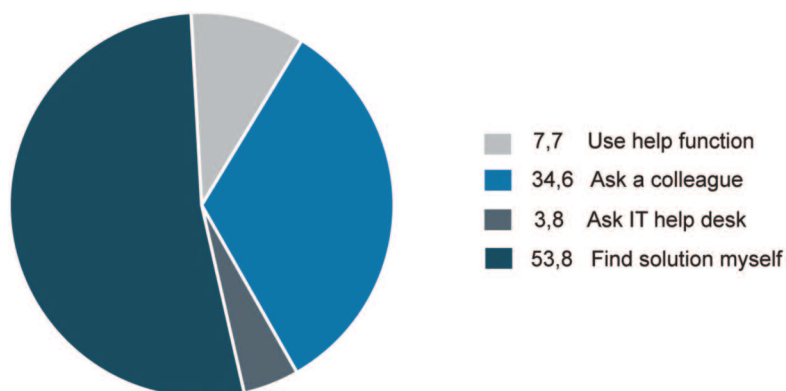
**50%** of respondents that use the EXCEL application try to find a solution themselves whereas **36.7%** of participants would ask their colleagues for help. **8.3%** of respondents use the help function.

**3.3%** would search the Internet for a solution, while **1.7%** of respondents would ask the IT help desk. More or less EXCEL users display similar attitude compared to WORD users, which could reveal a pattern of behavior. Graphically, all the above is shown below.
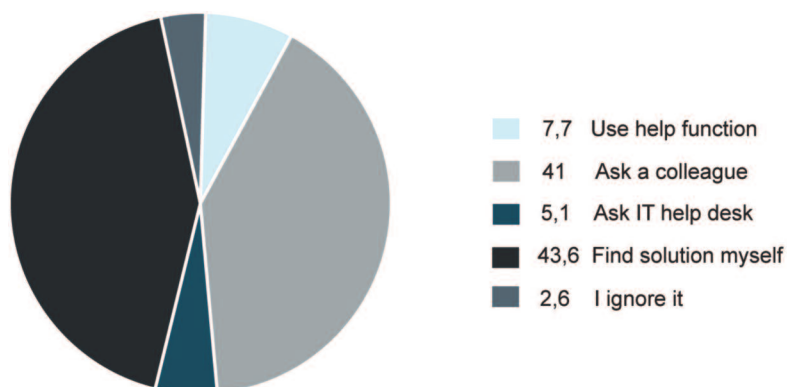
Graph 14: **How candidates handle EXCEL difficulties**



|     |      |                     |
| --- | ---- | ------------------- |
|     | 8,3  | Use help function   |
|     | 36,7 | Ask a colleague     |
|     | 1,7  | Ask IT help desk    |
|     | 50   | Find solution myself|
|     | 3,3  | Search internet     |

**43.6%** of respondents that use POWERPOINT try to find a solution themselves. **41%** of respondents would ask their colleagues for help. **7.7%** of respondents use the help function, while **5.1%** of respondents would ask the IT help desk. Moreover, **2.6%** of the participants would ignore the problem Again, similar patterns of behavior are observed.

The percentage of respondents that would ask a colleague for help is slightly increased, which could be related to the fact that POWEPOINT as an application has an aesthetic element that encourages people to share their views. Graphically, this information is shown below.
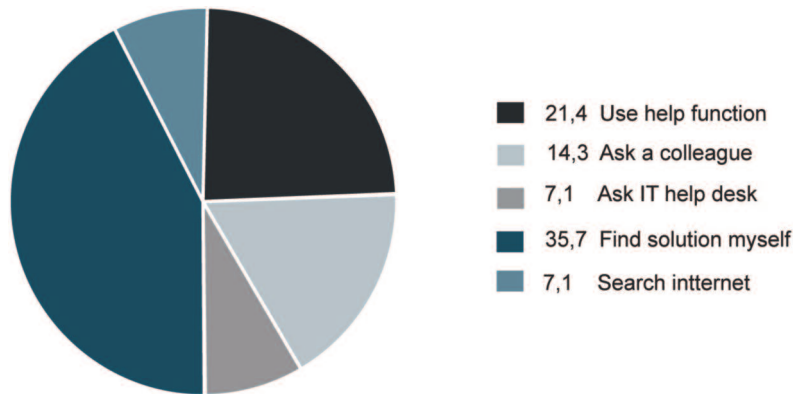
Graph 15: **How candidates handle POWERPOINT difficulties**



|     |      |                     |
| --- | ---- | ------------------- |
|     | 7,7  | Use help function   |
|     | 41   | Ask a colleague     |
|     | 5,1  | Ask IT help desk    |
|     | 43,6 | Find solution myself|
|     | 2,6  | I ignore it         |

**35.7%** of respondents that use the ACCESS application try to find a solution themselves. **21.4%** of respondents use the help function, while **14.3%** of respondents would ask their colleagues for help. **7.1%** of respondents would ask the IT help desk. **7.1%** would search the Internet for a solution. Patterns of behavior change slightly, maybe due to the increased difficulty of this application and the advanced knowledge that is required. Graphically, this information is shown below.

Graph 16**: How candidates handle ACCESS difficulties**



| | |
|---|---|
| ■ | 21,4  Use help function |
| ■ | 14,3  Ask a colleague |
| ■ | 7,1    Ask IT help desk |
| ■ | 35,7  Find solution myself |
| ■ | 7,1    Search intternet |

Overall, our findings indicate that almost half (**45.8%**) the people asked, would spend time trying to find a solution themselves, while trying to solve OFFICE related difficulties. **31.7%** of respondents would ask a colleague for help, while **11.3%** would use the help function. **5.2%** would search the Internet for a solution, while only a **4.4%** would make use of the IT help desk. Finally, **2.6%** of respondents would ignore the problem.

Graph 17: **How candidates handle OFFICE difficulties**
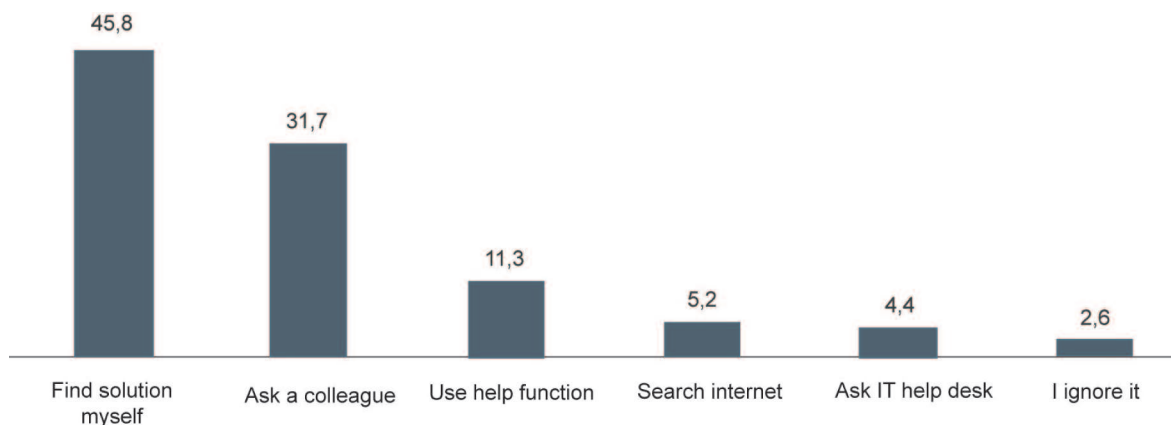
The question related to "*hours spent to solve OFFICE difficulties on a weekly basis*" revealed interesting findings. On average, respondents admitted spending **0.80** hours or **48.25 minutes per week** trying to solve WORD related difficulties. Given that the minimum cost per employee each month is **1,293** Euros and the actual cost of an employee for a company per month is **1,508.50** Euros (14 wages), this translates to **8.66** Euros per week and to **450.57 Euros per year** spent for each employee. Likewise, it was found that respondents spend **1.13** hours or **67.88 minutes per week** to solve EXCEL related difficulties. This translates to **12.19** Euros per week and to **633.92 Euros per year** for each employee. POWERPOINT users spend **1** hour or **60 minutes each week** trying to solve difficulties, which translates to **10.77** Euros per week and to **560.30 Euros per year** for each employee.

ACCESS users spend **2.45** hours or **147.50 minutes per week** to solve problems. Time is increased given the complexity of the specific application, which translates to **26.48** Euros per week and to **1377.40 Euros per year** for each employee.

On average, it was found that users spend **1.34** hours or **80.91** minutes per week to solve OFFICE related difficulties which translates to **14.52 Euros per week** and to **755.55 Euros per year** for each employee. Once the above numbers are multiplied by the number of employees in an organization, the minimum cost of IT skills ignorance can be calculated. Table 2 below summarizes the cost needed to solve OFFICE difficulties per application.

Table 2: **Cost of solving OFFICE difficulties**

| Cost of solving OFFICE difficulties for each employee | | |
| --- | --- | --- |
| | Euros per week | Euros per year |
| WORD | 8.66 | 450.57 |
| EXCEL | 12.19 | 633.92 |
| POWERPOINT | 10.77 | 560.30 |
| ACCESS | 26.48 | 1377.40 |
| AVERAGE | 14.52 | 755.55 |

## 5.2 Questionnaire given to candidates after ECDL training and certification

After candidates received ECDL training for a month they took the ECDL exams on ECDL EXPERT. ECDL test results were compared to the mock test results taken before training. In WORD, we can observe that **100%** of candidates achieved better results in the ECDL test after the training they have received.

In EXCEL, we can observe that **100%** of candidates also achieved better results in the ECDL test after the training they have received. The vast majority of candidates managed to improve performance considerably and actually their results were again much closer to their initial perceptions, as the graphs show below.

Graph 18: **ECDL test results before and after ECDL training in WORD**



Mock test in Word compared to final exam
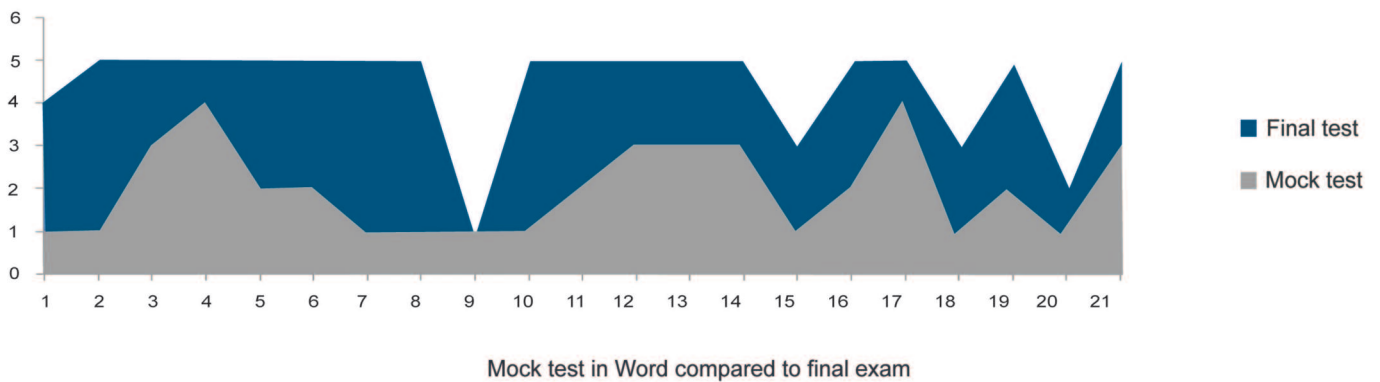
Graph 19: **ECDL test results compared to candidates' perceptions in WORD**



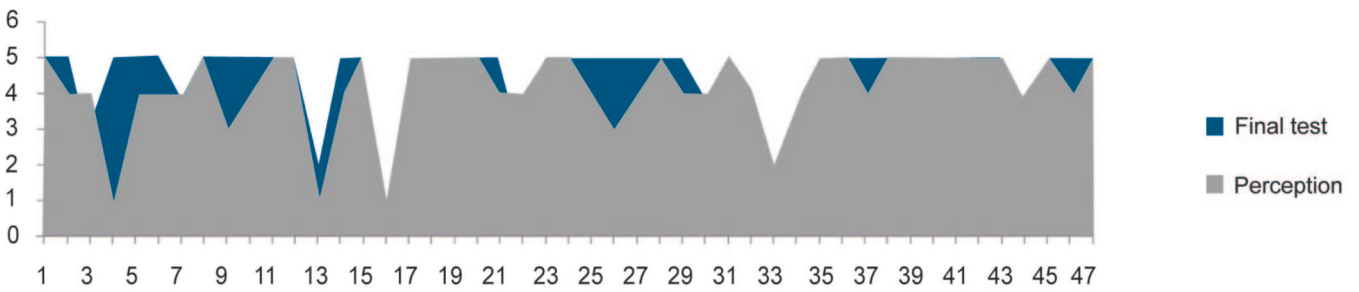Final test compared to candidate's perception
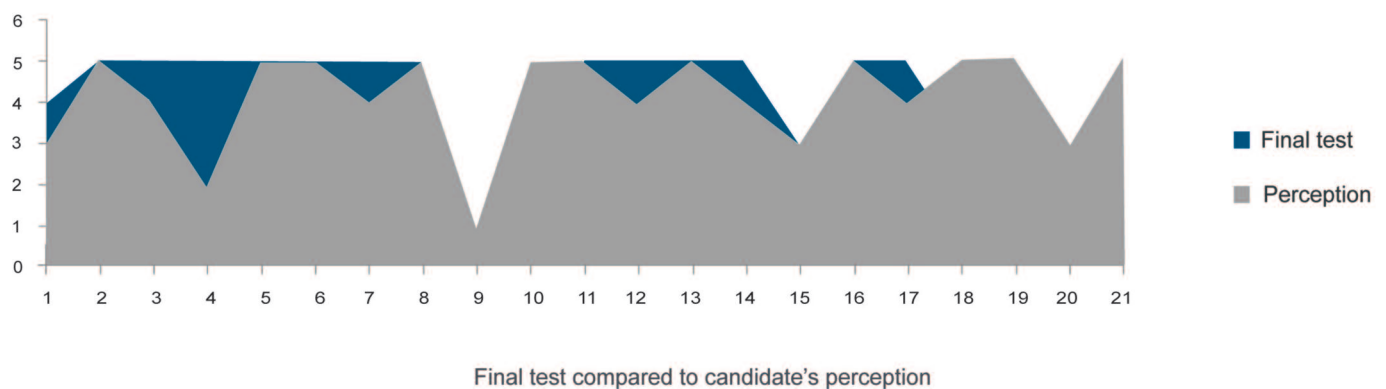
**Graph 20: ECDL exam results before and after ECDL training in EXCEL**
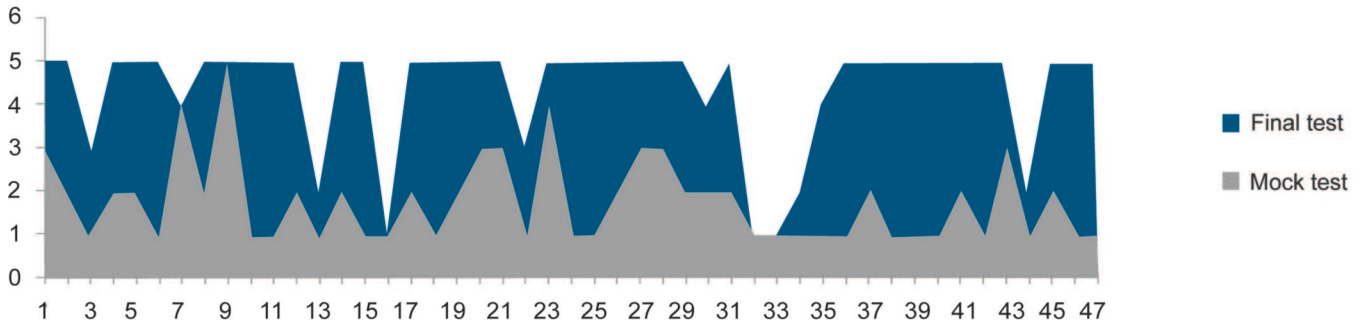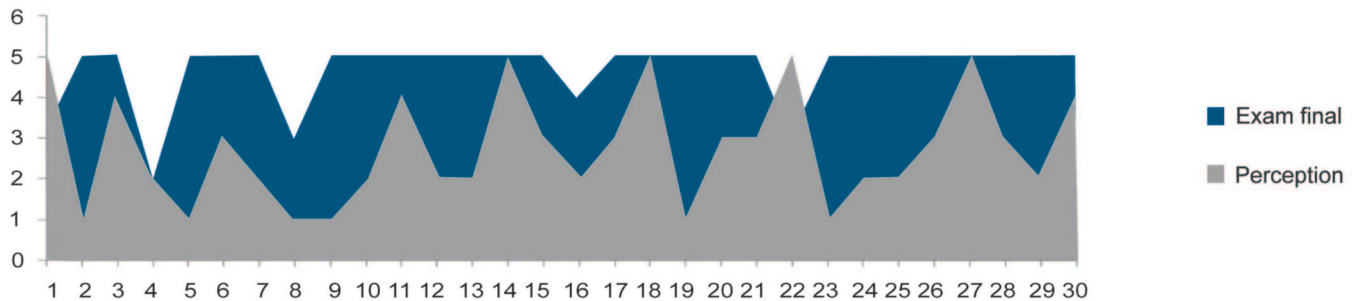
Mock test in Excel compared to final exam

**Graph 21: ECDL test results compared to candidates' perceptions in EXCEL**
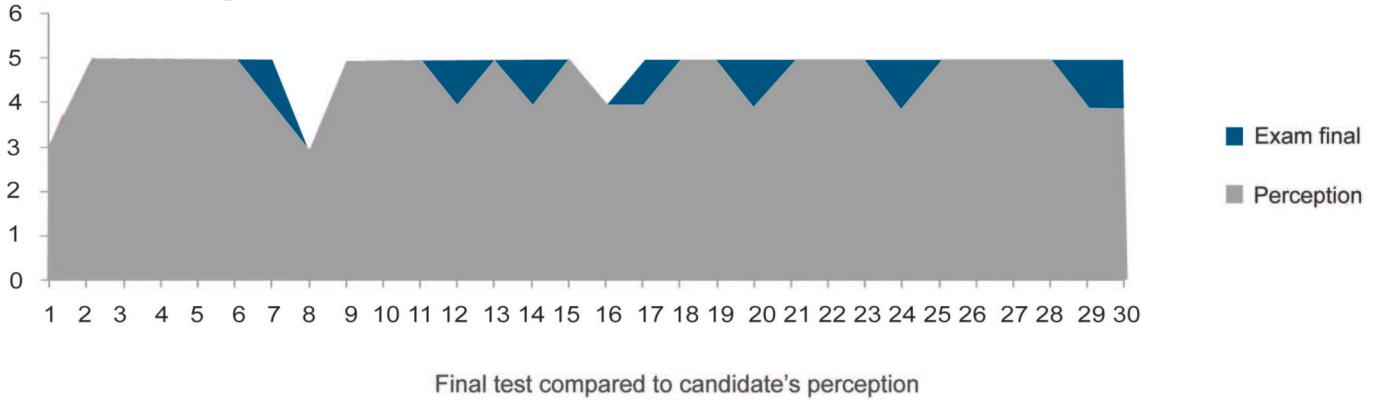
Final test compared to candidate's perception

In POWERPOINT, we also observe that **93.33%** of candidates achieved better results in the ECDL test after the training they have received. The vast majority of candidates managed to improve performance considerably and actually their results were again much closer to their perceptions, as the graphs show below.

**Graph 22: ECDL test results before and after ECDL training in POWERPOINT**

Mock test in Powerpoint compared to final exam

Graph 23: **ECDL test results compared to candidates' perceptions in POWERPOINT**

Final test compared to candidate's perception

In ACCESS, we observe that **91.66%** of candidates achieved better results in the ECDL test after the training they have received.The vast majority of candidates managed to improve performance considerably and actually their results were again much closer to their perceptions, as the graphs show below.



Graph 24: **ECDL test results before and after ECDL training in ACCESS**

Mock test in Access compared to final exam
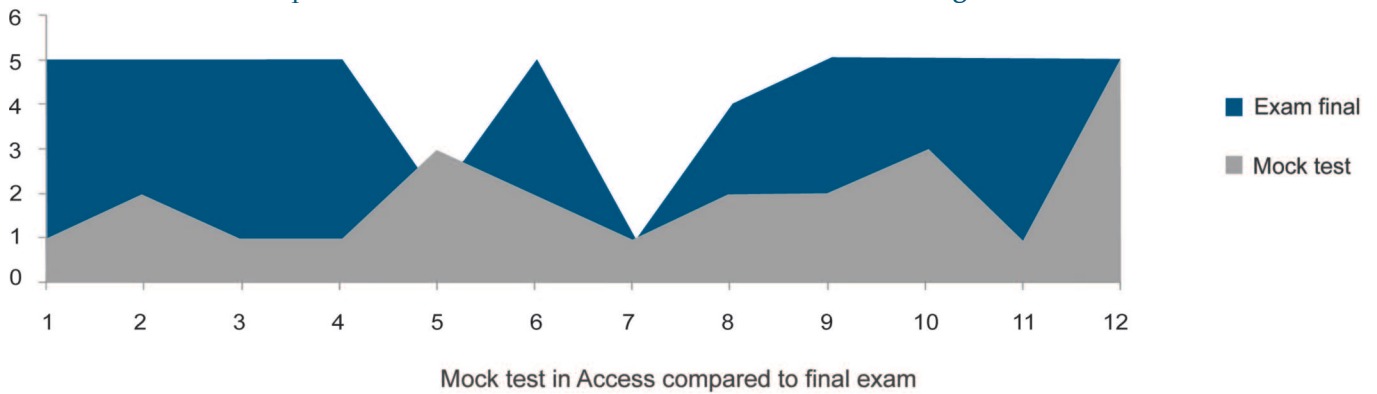


Graph 25: **ECDL test results compared to candidates' perceptions in ACCESS**

Final test compared to candidate's perception
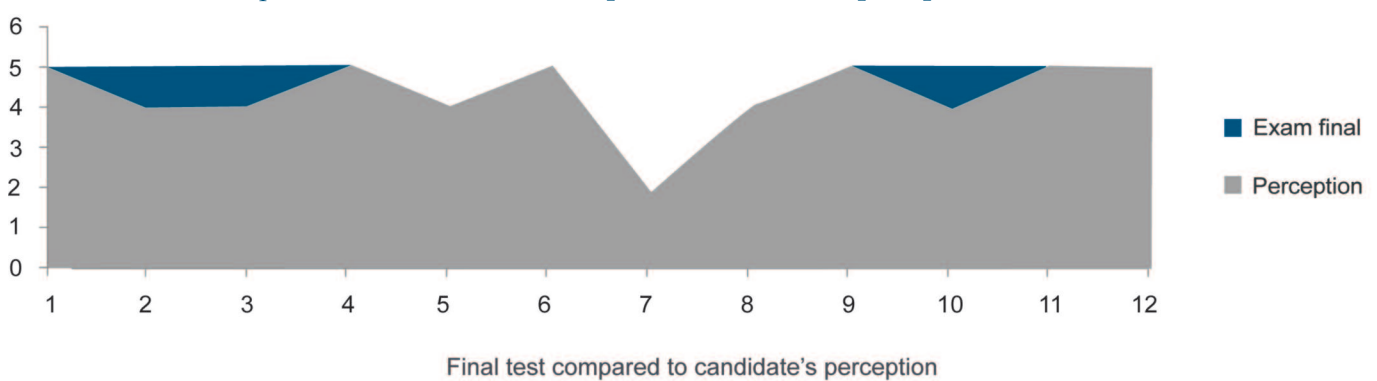
Once candidates received the ECDL training for a month and certified their skills, they were asked to report again the "*hours spent to solve OFFICE difficulties on a weekly basis*". Findings are impressive as the graph below suggests. On average, respondents admitted spending **26.3** minutes per week trying to solve WORD related difficulties.

Likewise, it was found that respondents spend **49.9** minutes per week to solve EXCEL related difficulties. POWERPOINT users spend **48.9** minutes each week trying to solve difficulties. ACCESS users spend **65.5** minutes per week to solve problems.

Graph 26**: Average minutes spent to solve difficulties per week**



Average minutes spent to solve difficulties per week
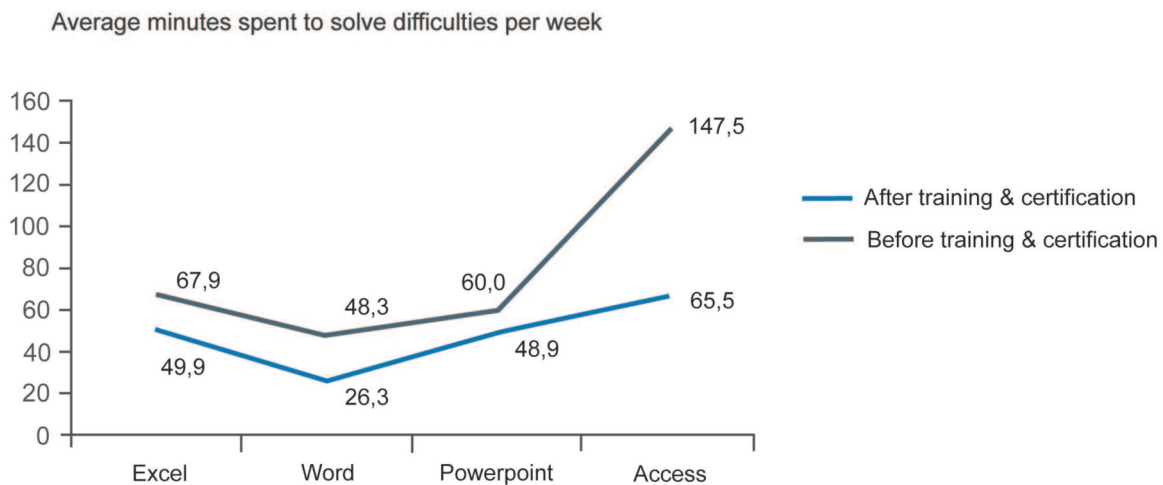
In total, it was identified that **19** working hours concerning WORD can be saved per year after ECDL training and certification. Furthermore, **15.6** working hours on EXCEL use can be saved per year after ECDL training and certification

while **9.6** working hours on POWERPOINT use can be saved per year after ECDL training and certification and **71.1** working hours on ACCESS use can be saved per year after ECDL training and certification. The following table summarizes the hours saved per application.

Table 3: **Working hours saved after training and certification**

| Working hours saved per year after training and certification | | | |
|---|---|---|---|
| WORD | EXCEL | POWERPOINT | ACCESS |
| 19 | 15.6 | 9.6 | 71.1 |

Candidates were also asked to report their perceptions on whether they think their knowledge is sufficient after ECDL training and certification. On average, as the graph below shows, **48.4%** of candidates believe that their knowledge is sufficient after the training and certification.

**34.4%** of candidates partially agree while **7.4%** of candidates expressed indifference in this question, **4.2%** of candidates partially disagreed and **5.7%** of candidates disagreed that their knowledge is sufficient after ECDL training and certification.
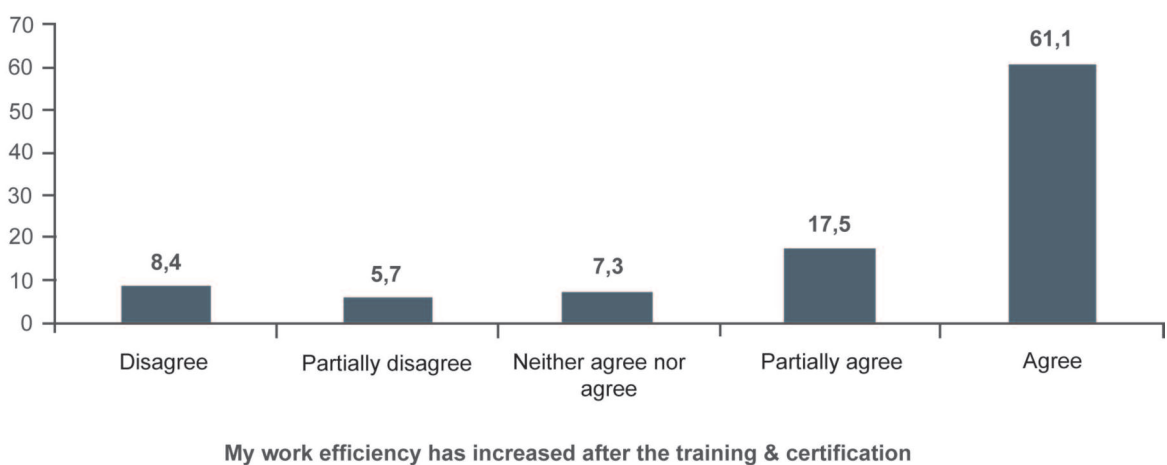
Graph 27: **Candidates' perceptions after training and certification**



**My knowledge is sufficient after the training & certification**
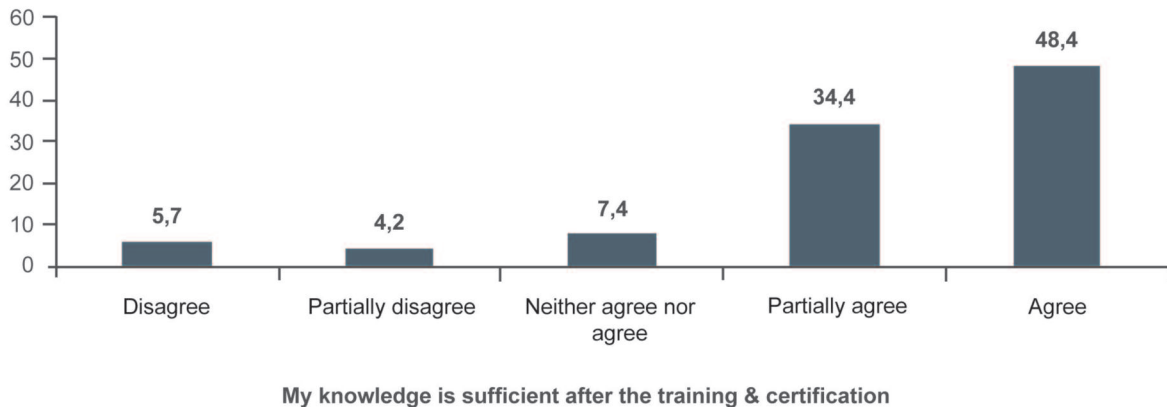
Candidates were also asked to report their views on whether they think their work efficiency has improved after ECDL training and certification. On average, as the graph below shows, **61.1%** of candidates agree. **17.5%** of candidates partially agree.

While **7.3%** of candidates expressed indifference in this question, **5.7%** of candidates partially disagreed and **8.4%** of candidates disagreed that their work efficiency has improved after ECDL training and certification.
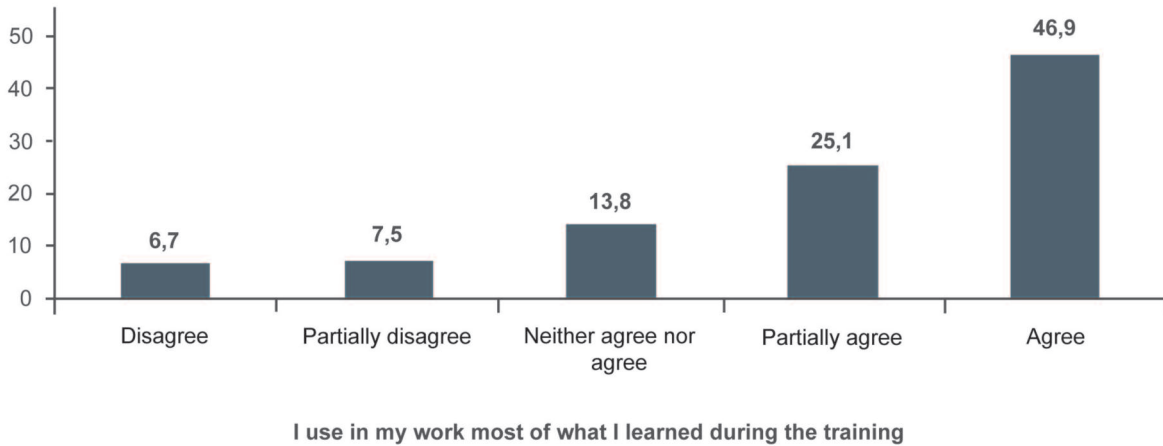
Graph 28: **Candidates' perceptions after training and certification**



**My work efficiency has increased after the training & certification**

Candidates were also asked to report their views on whether they apply in their work most of what they learnt during the training period. On average, as the graph below shows, **46.9%** of candidates agree.

**25.1%** of candidates partially agree, while **13.8%** of candidates expressed indifference in this question. **7.5%** of candidates partially disagreed and **6.7%** of candidates disagreed that they use in their work most of what they learned during training.

Graph 29**: Candidates' perceptions on knowledge usage after training and certification**



**I use in my work most of what I learned during the training**

Candidates were also asked to report their views on whether their job satisfaction improved after ECDL training and certification. On average, as the graph below shows, **51.7%** of candidates agree.**22.5%** of candidates partially agree.

While **11.7%** of candidates expressed indifference in this question, **3.6%** of candidates partially disagreed and **10.5%** of candidates disagreed that their job satisfaction improved after ECDL training and certification.

Graph 30: **Candidates' perceptions on job satisfaction after training and certification**



**Training and certification improved my job satisfaction**
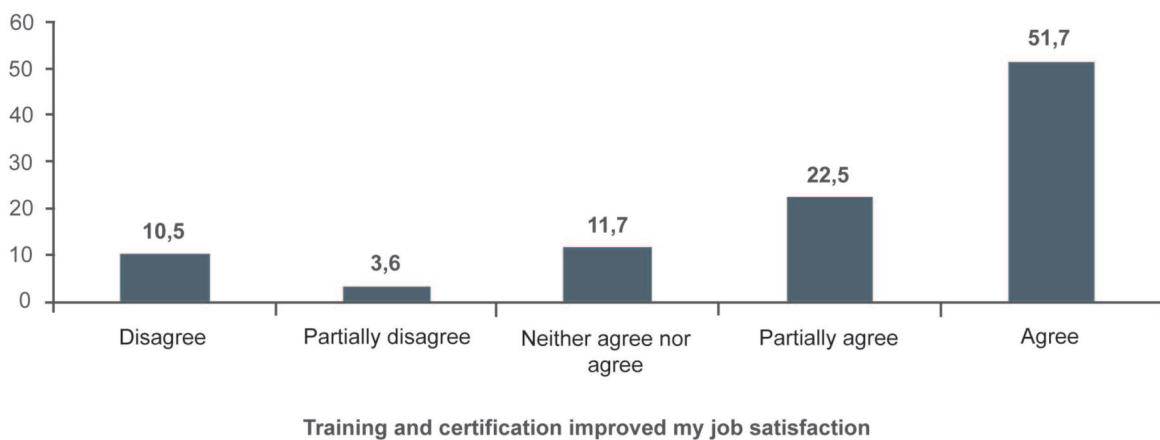
Moreover, the participants were asked to report their views on whether their relations with colleagues improved after the ECDL training and certification. On average, as the graph below shows, **22.3%** of candidates agree. **13.6%** of candidates partially agree. While **42.9%** of candidates expressed indifference in this question,

5.2% of candidates partially disagreed and **16%** of candidates disagreed that their relations with colleagues improved after ECDL training and certification. Overall, training doesn't seem to have great influence on the participants concerning the way they interact with their colleagues.

Graph 31: **Candidates' perceptions on work relations after training and certification**



Training improved my working relations with my colleagues
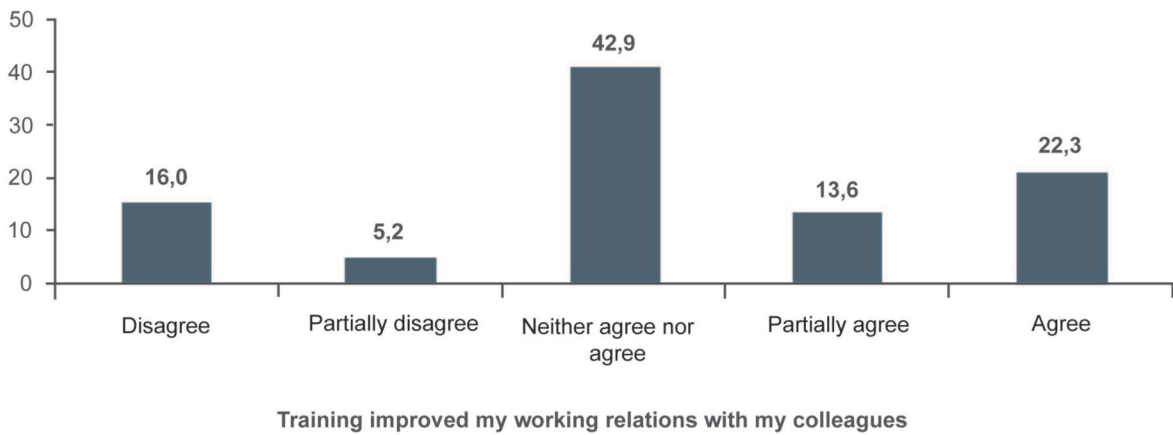
Candidates were also asked to report their views on whether their organizational loyalty improved after ECDL training and certification. On average, as the graph below shows, **32.6%** of candidates agree. **16.1%** of candidates partially agree.

While **31.8%** of candidates expressed indifference in this question, **5.7%** of candidates partially disagreed and **13.7%** of candidates disagreed that their organizational loyalty improved after ECDL training and certification. It appears though, that more than **48%** of respondents believe that training and certification strengthened their corporate loyalty.

Graph 32: **Candidates' perceptions on organizational loyalty after training and certification**



Training and certification strengthened my corporate loyalty
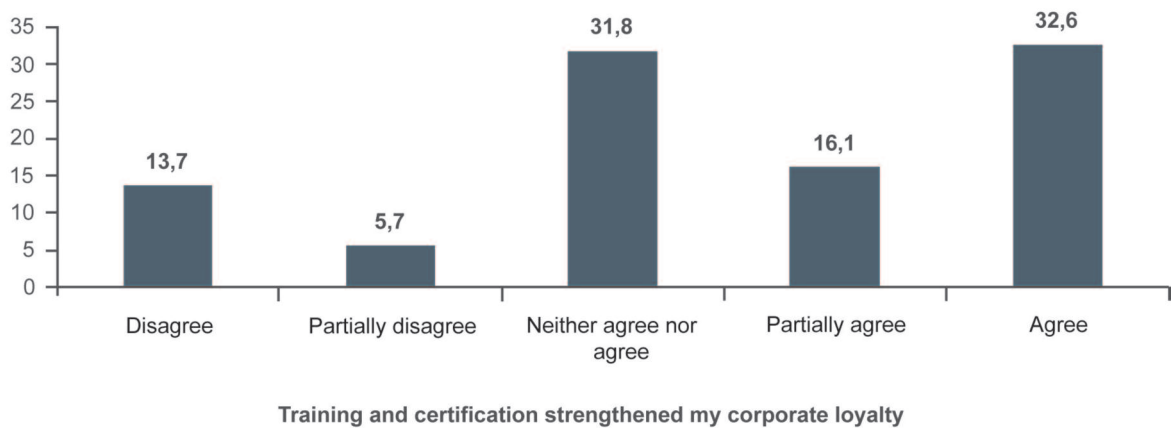
In addition, candidates were asked to report their views on whether their employability in the labor market was improved after ECDL training and certification. On average, as the graph below shows, **48.4%** of candidates agree.

**23.7%** of candidates partially agree. While **14.5%** of candidates expressed indifference in this question, **5.4%** of candidates partially disagreed and **8.1%** of candidates disagreed that their employability in the labor market improved after ECDL training and certification.

Graph 33: **Candidates' perceptions on employability after training and certification**



Training and certification improved my employability
in the labor market
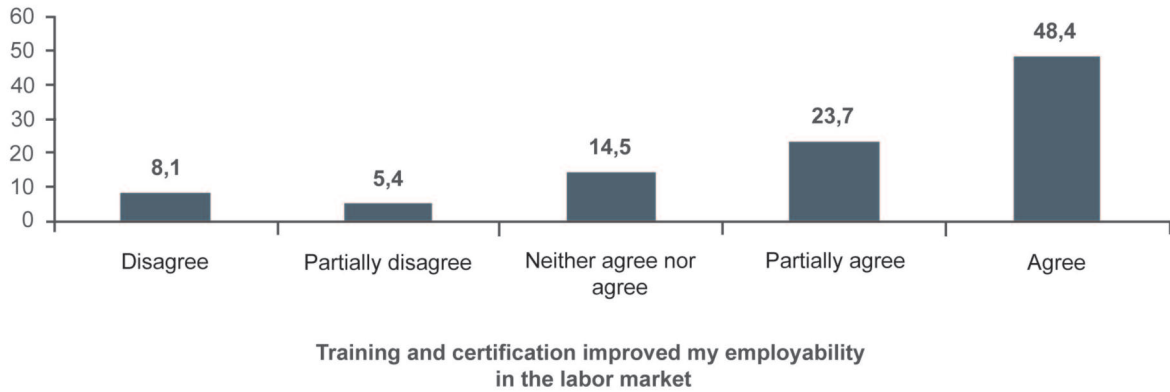
The participants also indicated whether their career prospects within the organization improved after ECDL training and certification. On average, as the graph below shows, **31.4%** of candidates agree. **26%** of candidates partially agree. While **24.4%** of candidates expressed indifference in this question, **8%** of candidates partially disagreed and **10.2%** of candidates disagreed that their career prospects within the organization improved after ECDL training and certification.

Graph 34: **Candidates' perceptions on career prospects after training and certification**



Training and certification improved my career prospects
within the organization

## 5.3 Questionnaire given to supervisors BEFORE ECDL training and certification

Supervisors, through their answers, provided us with very interesting insights with regards to their perceptions on the value of OFFICE training on their employees. 80.8% of supervisors consider that training on WORD will increase the sense of job satisfaction of their employees. 65% of supervisors believe the same for EXCEL training while 59.5% and 61.5% of supervisors believe the same for training on POWERPOINT and ACCESS respectively.

Overall, as the graph below shows, 90.1% of supervisors agree or partially agree that training will increase the employee's sense of job satisfaction. 7.9% of supervisors appeared to be indifferent in this question, while 2% of supervisors disagreed that there is a relationship between OFFICE training and increase in employee job satisfaction.

Graph 35: **Supervisors' perception on training-increase in job satisfaction**



Through training the employee will increase his/her job satisfaction
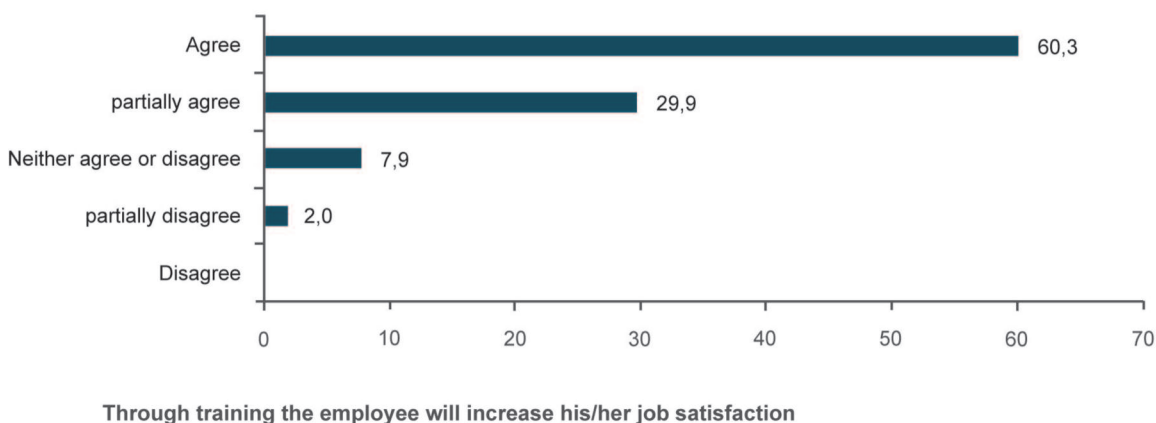
When asked whether training will improve employees' relations with colleagues or not, **19.58%** of supervisors agreed, while **29.3%** of them merely agreed. **27.95%** of supervisors admitted indifference, while **23%** of them partially disagreed or disagreed.

Graph 36: **Supervisors' perception on training-improved relations with colleagues**
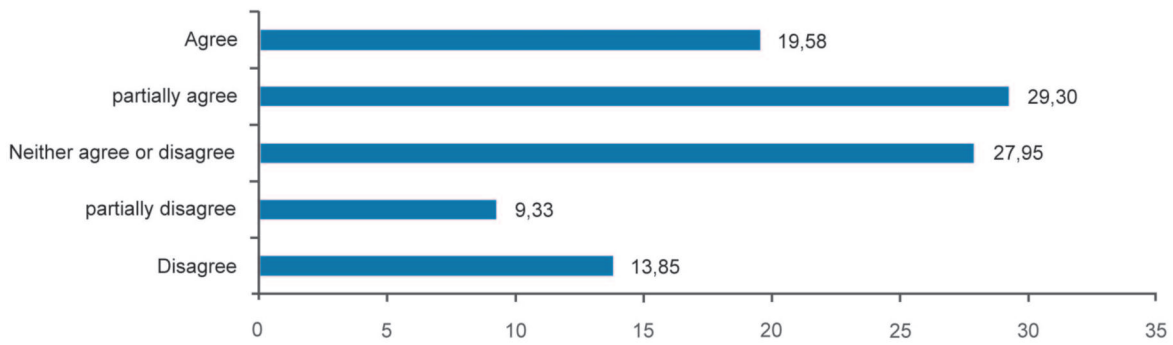


**Through training the employee will improve the relations with his/her colleagues**

| | |
|---|---|
| Agree | 19,58 |
| partially agree | 29,30 |
| Neither agree or disagree | 27,95 |
| partially disagree | 9,33 |
| Disagree | 13,85 |

Regarding employees' loyalty to the organization, as the graph shows below, **23.6%** of supervisors agreed that training would have a positive effect. **30.4%** of supervisors merely agreed on this.

**32%** of supervisors neither agreed nor disagreed; while **8.3%** partially disagreed and **5.8%** disagreed that training would increase employees' loyalty to the organization.

Graph 37: **Supervisors' perception on training-improved corporate loyalty**
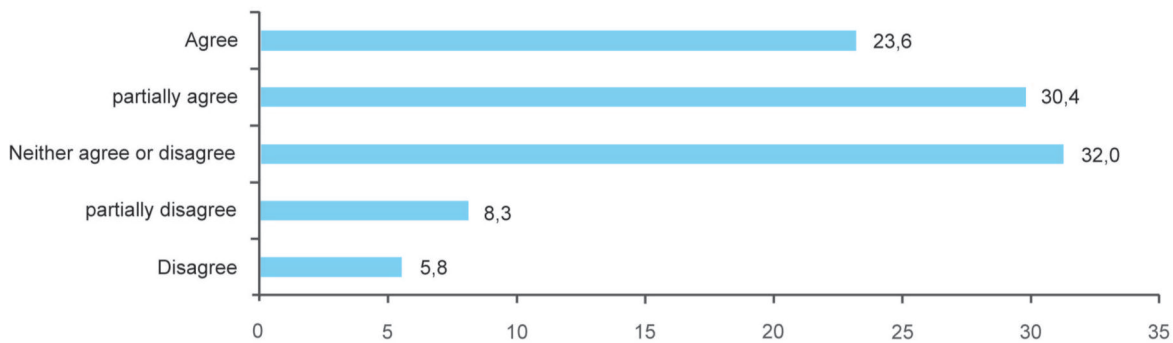


**Through training the employee will increase his/her corporate loyalty**

| | |
|---|---|
| Agree | 23,6 |
| partially agree | 30,4 |
| Neither agree or disagree | 32,0 |
| partially disagree | 8,3 |
| Disagree | 5,8 |

Regarding the question whether training will increase the employee's employability in the job market, **60.75%** of supervisors agreed, while **30.75%** merely agreed. **8.5%** expressed indifference in the same question.

Agree — 60,75
partially agree — 30,75
Neither agree or disagree — 8,5
partially disagree — 0
Disagree — 0
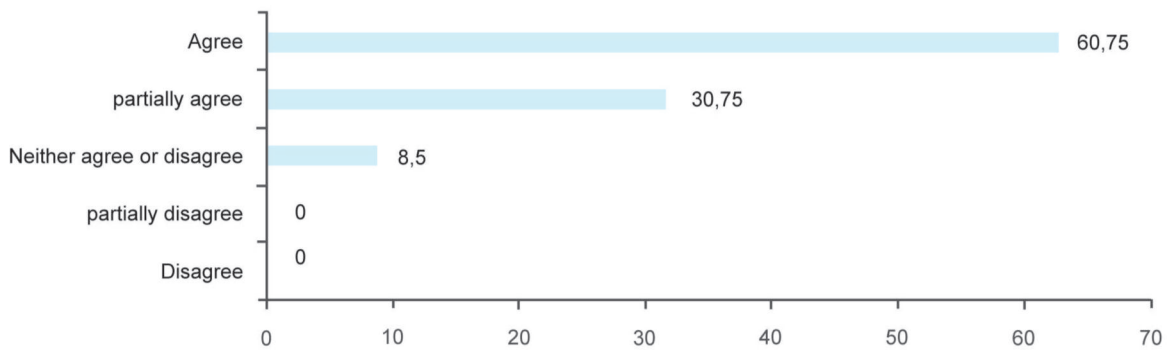
**Through training the employee will improve his/her employability in the labor market**

When asked whether training will improve employees' career path in the organization, **33%** of supervisors agreed, while **40.3%** merely agreed. **13.9%** of supervisors expressed indifference, while **7.1%** partially disagreed and **5.7%** of them disagreed.

Graph 39: **Supervisors' perception on training-improved career path**



Agree — 33,0
partially agree — 40,3
Neither agree or disagree — 13,9
partially disagree — 7,1
Disagree — 5,7
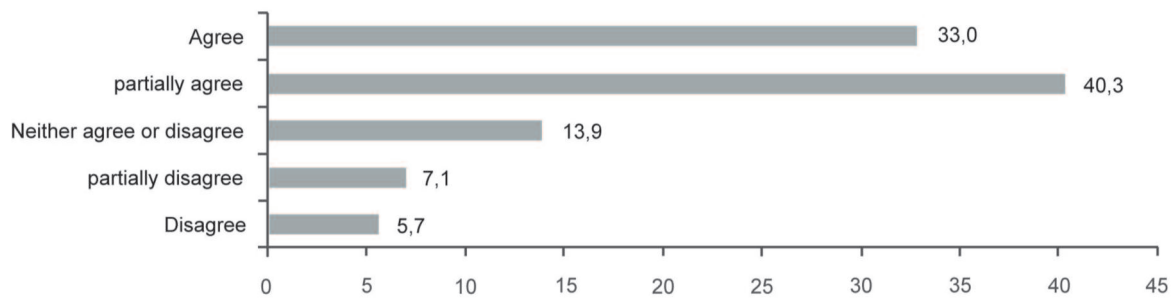
**Through training the employee will improve his/her career path in the organization**

Finally, certification of IT skills is important for recruitment for **38.4%** of supervisors. **31.1%** of supervisors merely agree on this, while **16.1%** of them expressed indifference. **6.1%** partially disagreed and **8.4%** of supervisors disagreed on this question.
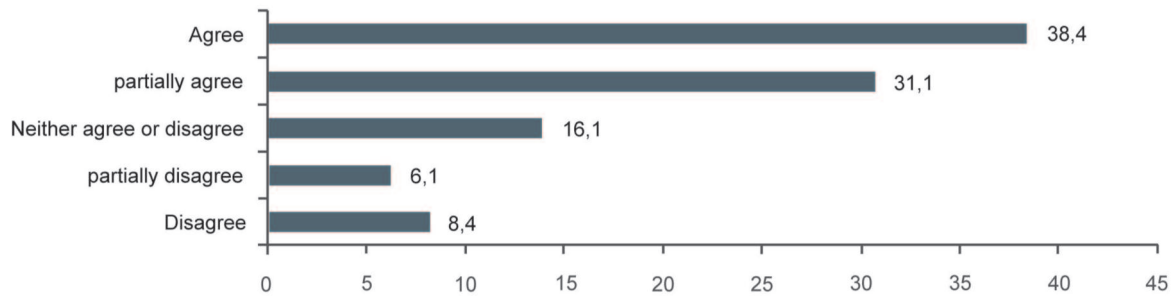
IT Certification is very important in order to recruit a new employee

## 5.4 Questionnaire given to supervisors AFTER ECDL training and certification
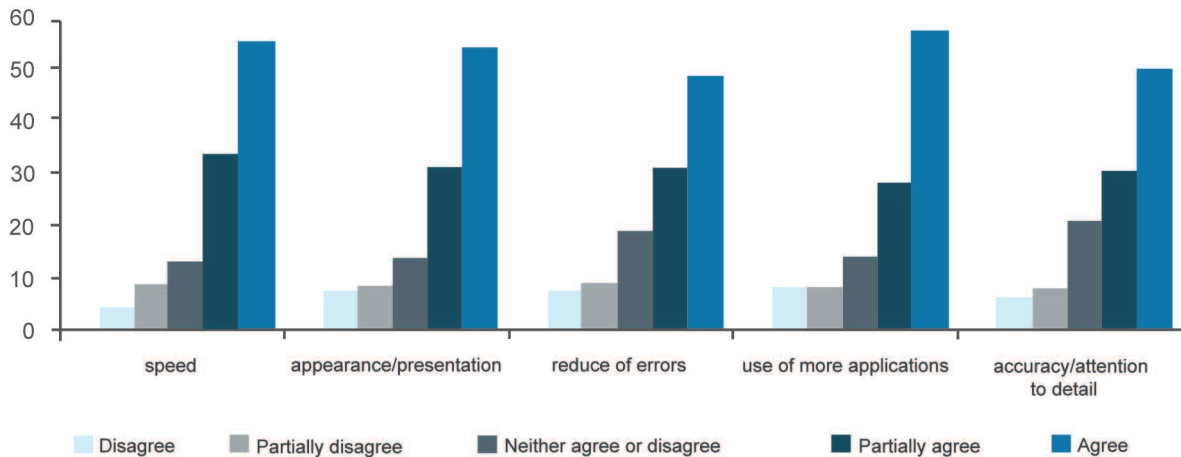
Supervisors reported their views on the influence ECDL training and certification had on the candidate's performance. On average, **52.2%** of supervisors agree that ECDL training and certification improved candidate's **speed** on either WORD/EXCEL/POWERPOINT/ACCESS, **30.8%** of supervisors partially agree that ECDL training and certification improved candidate's speed on either WORD/EXCEL/POWERPOINT/ACCESS, while **10.1%** of supervisors expressed indifference. **5.7%** of supervisors partially disagreed and **1.2%** of them disagreed that ECDL training and certification improved candidate's speed on WORD/EXCEL/POWERPOINT/ACCESS. With regards to **appearance and presentation** of a document on either WORD/EXCEL/POWERPOINT/ACCESS, **51%** of supervisors agree it has improved, **28.4%** of supervisors partially agree, while **10.8%** of supervisors expressed indifference. **5.4%** of supervisors partially disagreed and **4.4%** of them

disagreed that ECDL training and certification improved appearance and presentation of a candidate's report on either WORD/EXCEL/POWERPOINT/ACCESS. With reference to **reduction of errors**, on either WORD/EXCEL/POWERPOINT/ACCESS, **45.7%** of supervisors agree it has improved, **28%** of supervisors partially agree, while **15.9%** of supervisors expressed indifference. **5.9 %** of supervisors partially disagreed and **4.5%** of them disagreed that ECDL training and certification improved reduction of errors on either WORD/EXCEL/POWERPOINT/ACCESS. In relation to **usage of more applications**, on either WORD/EXCEL/POWERPOINT/ACCESS, **54.2%** of supervisors agree it has improved, **25.3%** of supervisors partially agree, while **10.9%** of supervisors expressed indifference. **5.1 %** of supervisors partially disagreed and **4.6%** of them disagreed that ECDL training and certification improved usage of more applications on either

WORD/EXCEL/POWERPOINT/ACCESS. Regarding **accuracy/attention to detail**, on either WORD/EXCEL/POWERPOINT/ACCESS, **46.6%** of supervisors agree it has improved, **27.3%** of supervisors partially agree, while **17.7%** of supervisors expressed indifference.

**5%** of supervisors partially disagreed and **3.4%** of them disagreed that ECDL training and certification improved accuracy/attention to detail on either WORD/EXCEL/POWERPOINT/ACCESS. The graph below summarizes the above findings.

Graph 41: **Supervisors' perception on performance after training and certification**



After candidates received ECDL training and certification, their supervisors were asked to report if and how often the candidate asks the supervisor questions related to OFFICE. **84.6%** of supervisors reported that after ECDL training and certification,

the employee has not asked for help to solve difficulties in OFFICE. **15.4%** of supervisors reported that the candidate has asked for help to solve difficulties in OFFICE, as the graph shows below.

Graph 42: **Supervisors' receiving questions after training and certification**



15,4 Yes
84,6 No
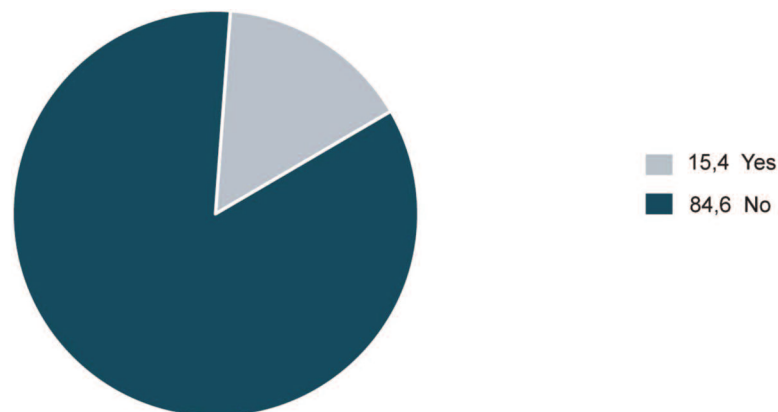
Regarding the frequency of questions, **while before training and certification**, **19.2%** of supervisors reported being asked WORD related questions 1-2 times per week, **3.8%** of supervisors reported being asked WORD related questions 3-5 times and **3.8%** of supervisors reported being asked WORD related questions more than 5 times per week,

the number fell to **9.5%** who reported being asked WORD related questions 1-2 times per week after ECDL training and certification, as the graph shows below. So **after training & Certification** only 9.5% of supervisors received questions regarding WORD.
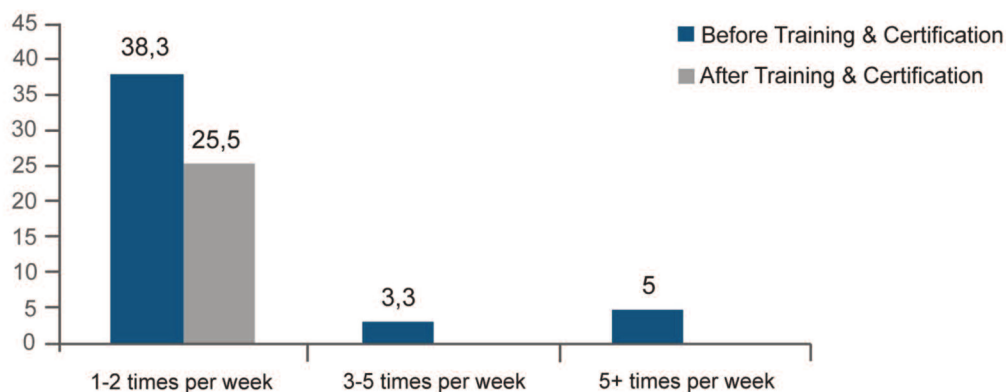
Graph 43: **Supervisors' receiving WORD questions before & after training and certification**
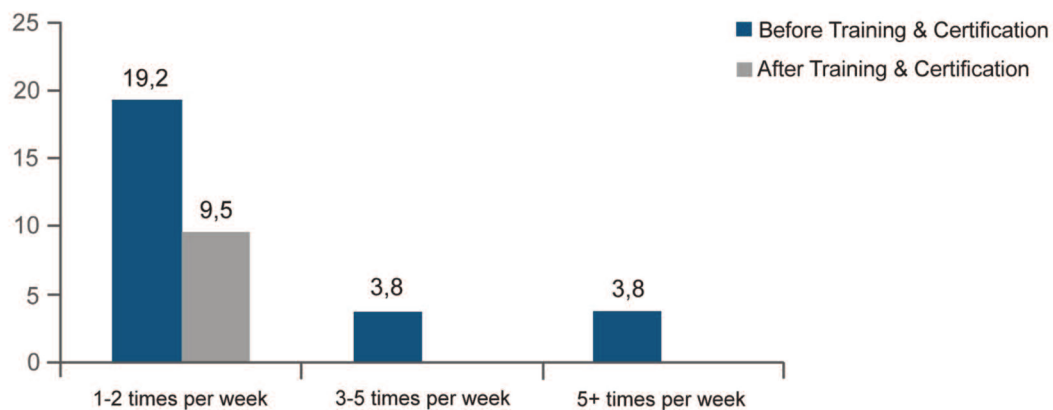


While before training and certification, **38.3%** of supervisors reported being asked EXCEL related questions 1-2 times per week, **3.3%** of supervisors reported being asked EXCEL related questions 3-5 times and **5%** of supervisors reported being asked

EXCEL related questions more than 5 times, the number fell to **25.5%** who reported being asked EXCEL related questions 1-2 times per week after ECDL training and certification, as the graph shows below.
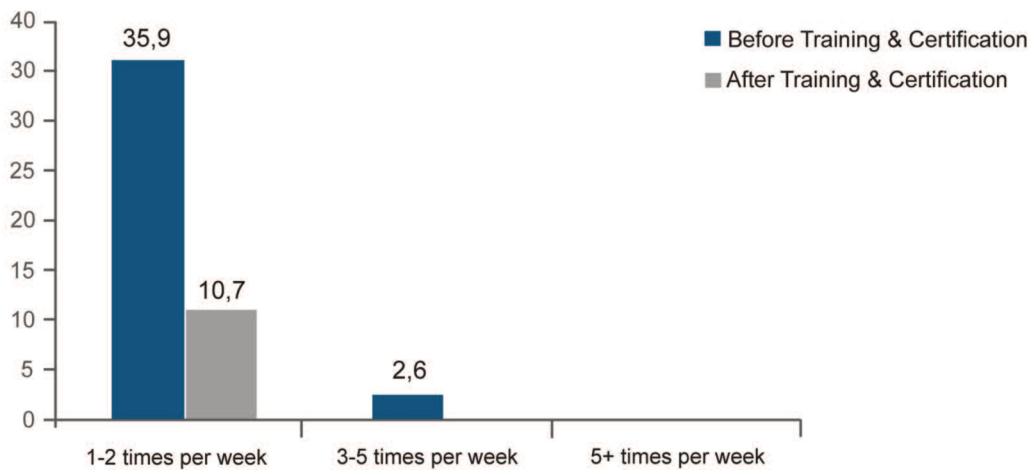
Graph 44: **Supervisors' receiving EXCEL questions before & after training and certification**

Moving to PPT application, before training and certification, **35.9%** of the supervisors were asked PPT related questions 1-2 times per week and **2.6%** of supervisors reported being asked PPT related questions 3-5 times,

the number fell to **10.7%** who reported being asked PPT related questions 1-2 times per week after PPT training and certification, as the graph shows below.

Graph 45: **Supervisors' receiving POWERPOINT questions before & after training and certification**



In ACCESS **7.1%** of supervisors reported being asked ACCESS related questions 1-2 times per week before the training whereas there were no related responses after ACCESS training and certification, as the graph shows below.

This appears to be connected to the complexity and specialization of ACCESS application since supervisors may not be even aware of ACCESS and employees have no reason to ask their help in the first place.

Graph 46: **Supervisors' receiving ACCESS questions before & after training and certification**
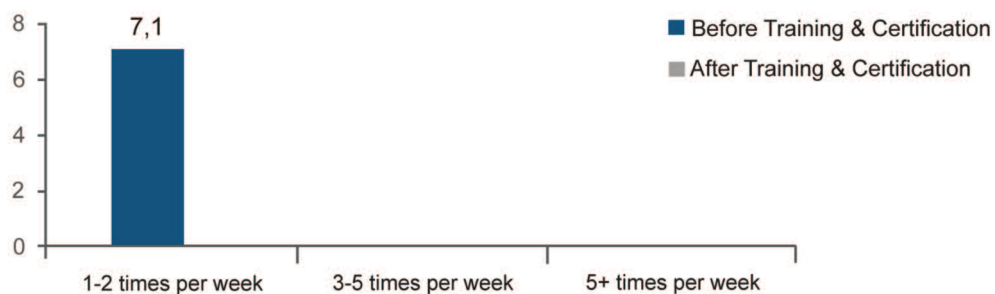
Supervisors were asked to present their views on the career potential of the employee within the organization after ECDL training and certification. **24.7%** of supervisors agree it has improved, **31.2%** of supervisors partially agree, while **31.6%** of supervisors expressed indifference.

**7.1%** of supervisors partially disagreed and **5.3%** of them disagreed that the career potential of the employee within the organization has improved after ECDL training and certification. The graph below summarizes the above findings.
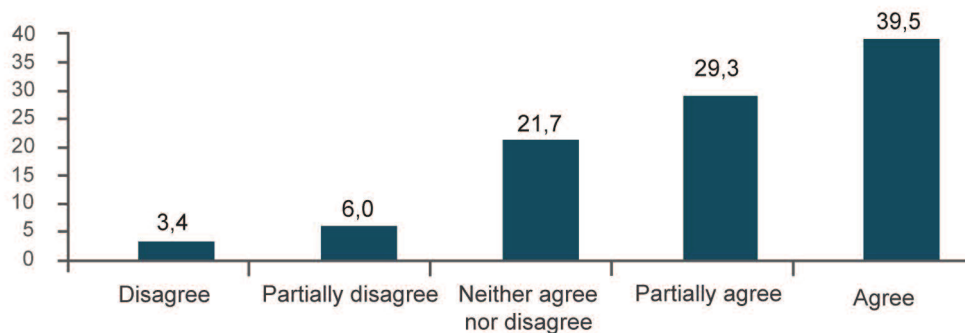
Graph 47: **Supervisors' views on career potential after training and certification**
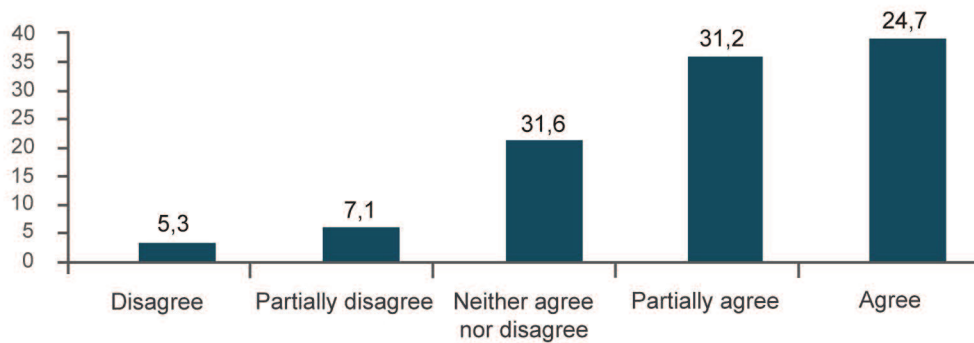


Supervisors were asked to present their views on the employability in the labor market after the ECDL training and certification. **39.5%** of supervisors agree it has improved, **29.3%** of supervisors partially agree, while **21.7%** of supervisors expressed indifference.

**6%** of supervisors partially disagreed and **3.4%** of them disagreed that the employability in the labor market of the employee has improved after ECDL training and certification. The graph below summarizes the above numbers.
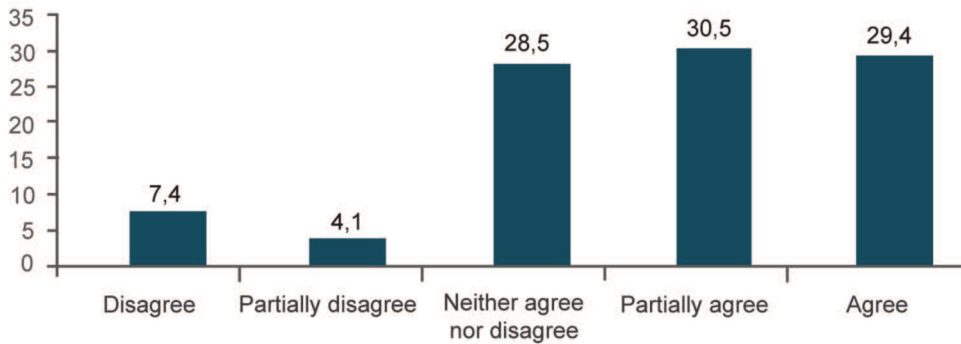
Graph 48: **Supervisors' views on employability after training and certification**

Supervisors were asked to present their views on the job satisfaction for the employee after ECDL training and certification. **29.4%** of supervisors agree it has improved, **30.5%** of supervisors partially agree, while **28.5%** of supervisors expressed indifference.

**4.1%** of supervisors partially disagreed and **7.4%** of them disagreed that job satisfaction of the employee has improved after ECDL training and certification. The graph below summarizes the above findings.

Graph 49**: Supervisors' perceptions on job satisfaction after training and certification**



Supervisors were asked to present their views on the employee's relations with his/her colleagues after ECDL training and certification. **22.4%** of supervisors agree that it has improved, **21.8%** of supervisors partially agree, while **43.9%** of supervisors expressed indifference.

**5.3%** of supervisors partially disagreed and **6.6%** of them disagreed that the employee's relations with his/her colleagues has improved after ECDL training and certification. The graph below summarizes the above findings.

Graph 50: **Supervisors' views on relations with colleagues after training and certification**
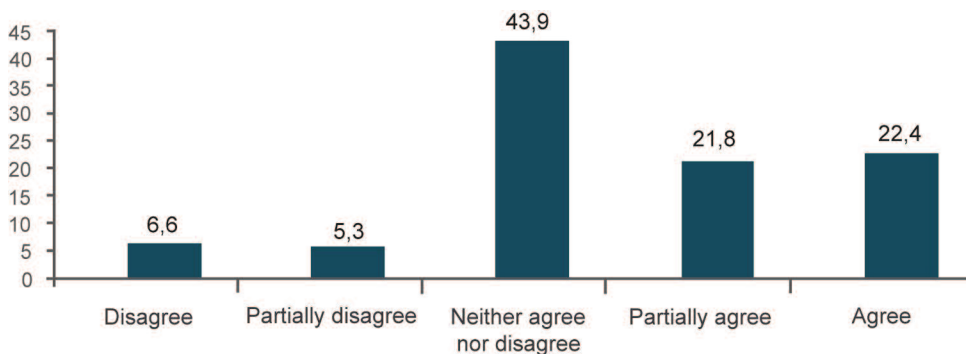
Supervisors were asked to present their views on the employee's organizational loyalty after ECDL training and certification. **22%** of supervisors agree it has improved, **23.7%** of supervisors partially agree, while **44.6%** of supervisors expressed indifference. **3.8%** of supervisors partially disagreed and **5.9%** of them disagreed that the employee's organizational loyalty has improved after ECDL training and certification. The graph below summarizes the above findings.
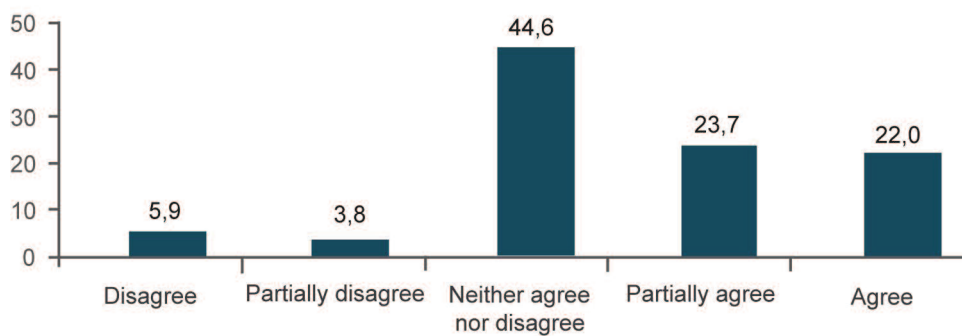
Graph 51: **Supervisors' views on organizational loyalty after training and certification**

## 5.5 Analysis of questionnaire addressed to HR managers

HR managers were asked to report the annual training cost per employee for the years 2006, 2007 and 2008. Their answers were grouped per industry giving quite interesting findings. Three broad categories of industries were employed in our sample:

1. manufacturing, construction

2. services, transport/logistics, education, tourism, banking

3. retail, pharmaceuticals

Our findings suggest that during 2006, **the annual training cost** per employee in manufacturing (including construction) industry reached **259.5** Euros.

The same cost increased to **283.3** Euros for the year 2007 and to **403.7** Euros for the year 2008. Regarding the annual training cost per employee in services industry (including transport/logistics, education, tourism, banking), it reached **407.8** Euros in 2006, **400.3** Euros in 2007 and an increase to **492.8** Euros in 2008. The annual training cost per employee in retail industry (including pharmaceuticals) reached **246.5** Euros in 2006, increased to **292.4** Euros in 2007 and decreased to **264** Euros in 2008. The second category appears to be higher than the other two mainly because the banking sector invested more on training than the rest of the industry sectors. The expenditures in training were increased from 2006 to 2008 but it would be interesting to repeat the survey for 2009 and 2010 in order to explore how the financial crisis has influenced the training budgets.

Graph 52: **Annual training cost per employee**



Annual training cost per employee
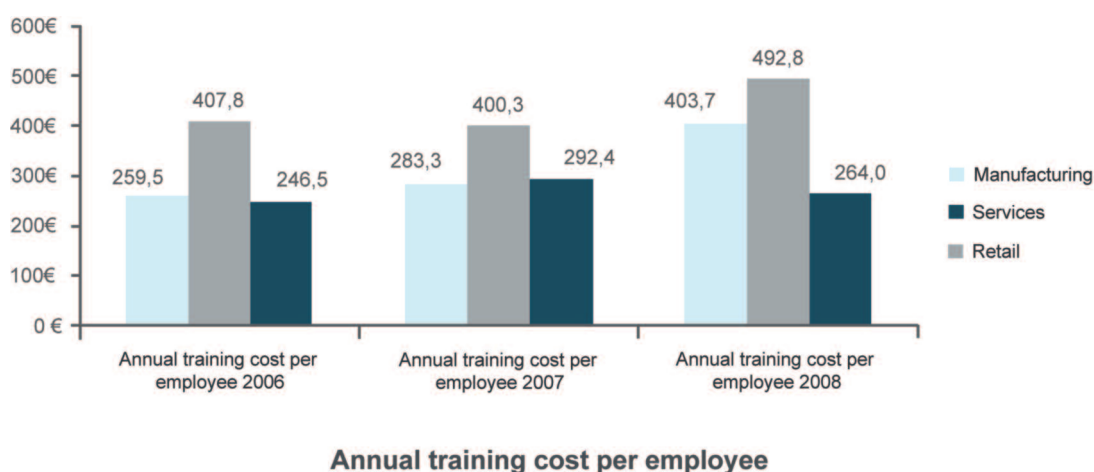
HR managers were also asked to report the **annual IT training cost** for the years 2006, 2007 and 2008. In average, in the manufacturing (including construction) industry, IT training cost reached **17,420** Euros in 2006, increased to **17,768.2** Euros in 2007 and decreased to **14,827.6** Euros in 2008. The annual IT training cost in services industry (including transport/logistics, education, tourism, and banking),

reached **9,100** Euros in 2006, decreased to **6,271.4** Euros in 2007 and decreased further to **4,422.1** Euros in 2008. With regards to the annual IT training cost in retail industry (including pharmaceuticals), it reached in total **2,666.7** Euros in 2006, increased to **3,500** Euros in 2007 and decreased to **2742.9** Euros in 2008, as the graph shows below.

Graph 53: **Annual IT training cost**



**Annual IT training cost**
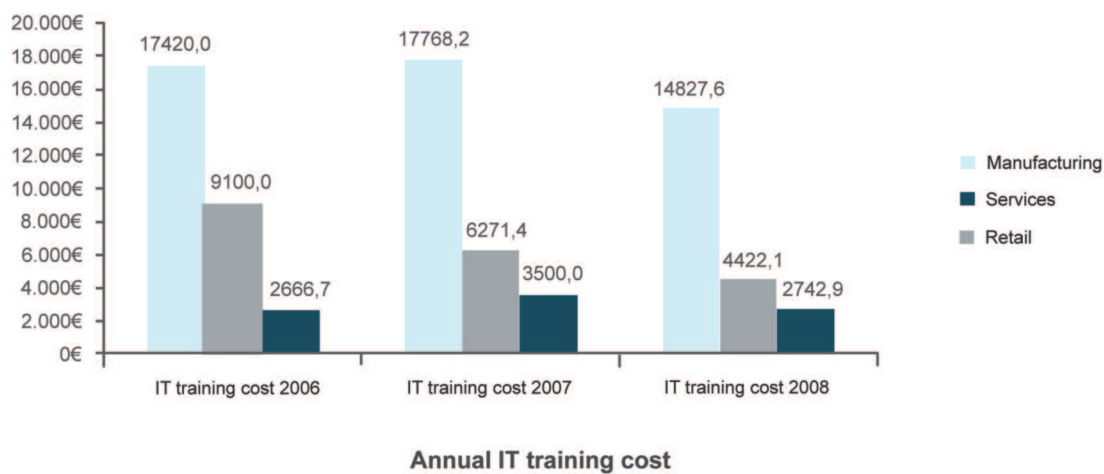
**53.5%** of HR managers admitted that ECDL certification is not widely known among employees. The vast majority of HR managers **(90.7%)** believe that newcomers should not possess ECDL certification while **79.1%** of them do not think of organizing IT training programs and use ECDL certification.

However, Human Resources Managers in other surveys such as RCI (see page 6 graph) state that IT skills basic or advanced are requested for most of the job postings.

Graph 54: **HR managers' perceptions on ECDL certification**
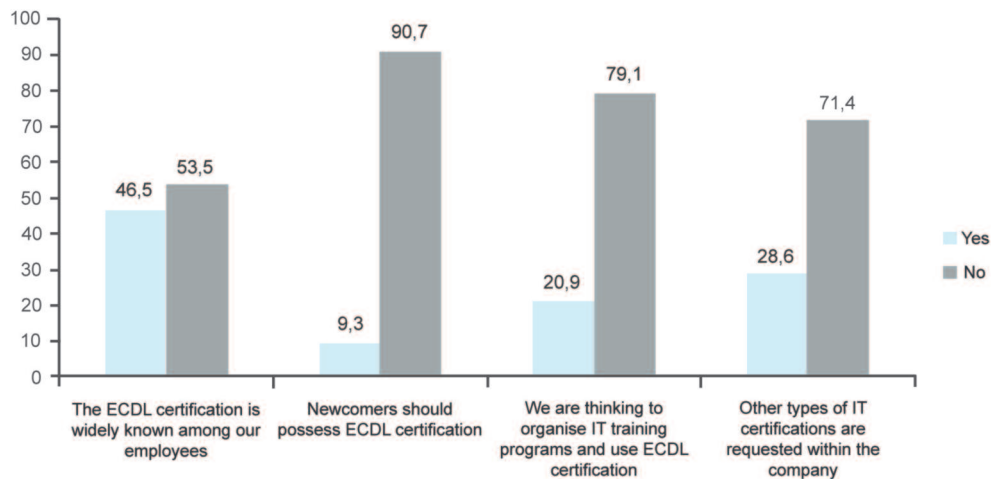
With regards to IT training initiatives, HR managers gave valuable insights. More than **72.7%** of them agree or partially agree that IT training initiatives aim a decreasing the skills' gap among the users. **77.5%** of HR managers agree or partially agree that IT training initiatives improve employees' satisfaction. Only **15.6%** of HR managers believe that IT training initiatives are considered as a reward for achieving individual goals. **72.8%** of HR managers agree or partially agree that IT training initiatives are linked to the annual individual development plan.

While **91.2%** of HR managers admit that IT training initiatives take place after supervisors' request, **87.9%** of them agree or partially agree that IT training initiatives take place after employees' request. **60.6%** of HR managers agree or partially agree that IT training initiatives are included in the annual development plan, as the graph shows below.

## Graph 55: HR managers' perceptions on IT training initiatives

In our company IT training initiatives
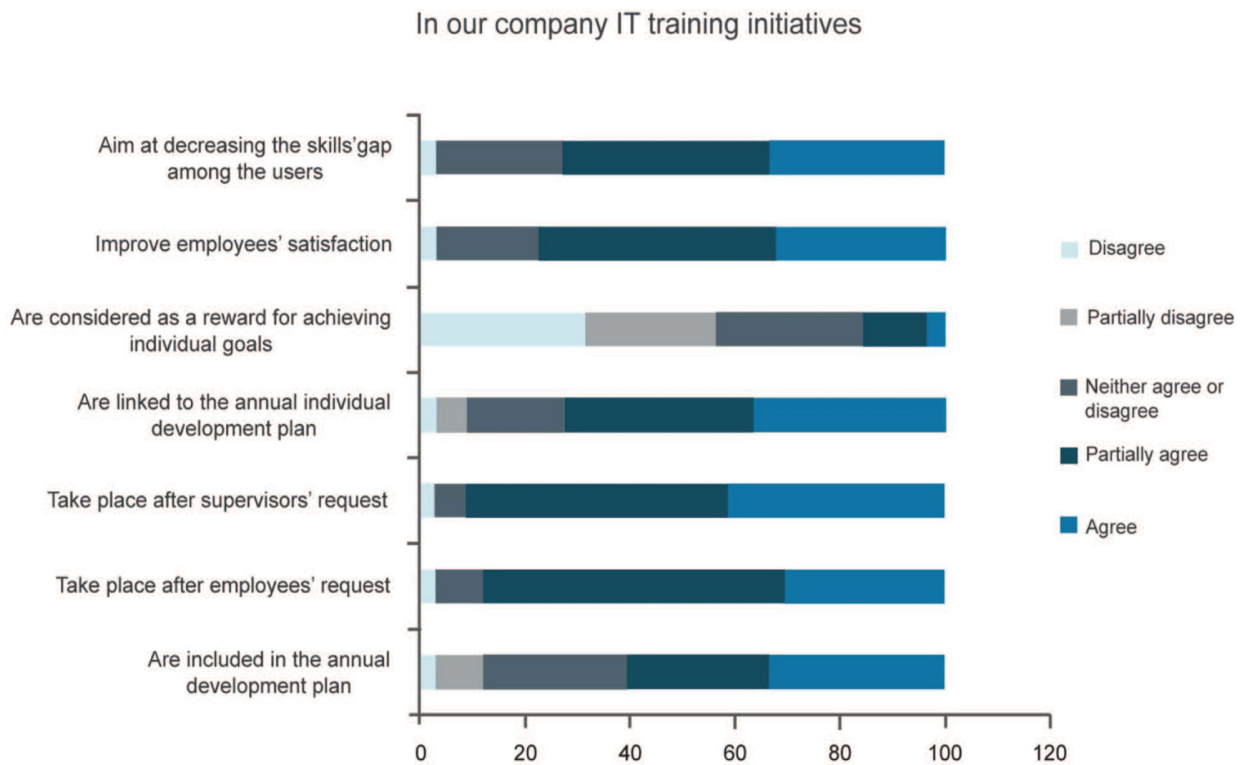


When asked to comment on the value of IT training initiatives for an organization, **36.4%** of HR managers agree or partially agree that IT training initiatives assist in employees' job rotation, **68.8%** agree or partially agree that IT training initiatives are necessary in order to continue working, **93.9%** agree or partially agree that IT training initiatives is a means to improve documents' quality, **59.4%** agree or partially agree that IT training initiatives is a way to improve company's corporate image,

**50%** agree or partially agree that IT training initiatives is a way to reduce administrative support procedures, **59.4%** agree or partially agree that IT training initiatives are necessary for reducing ICT users support costs and **94.2%** agree or partially agree that IT training initiatives improve the overall IT usability within the company, as the graph shows below.

In our company IT training initiatives
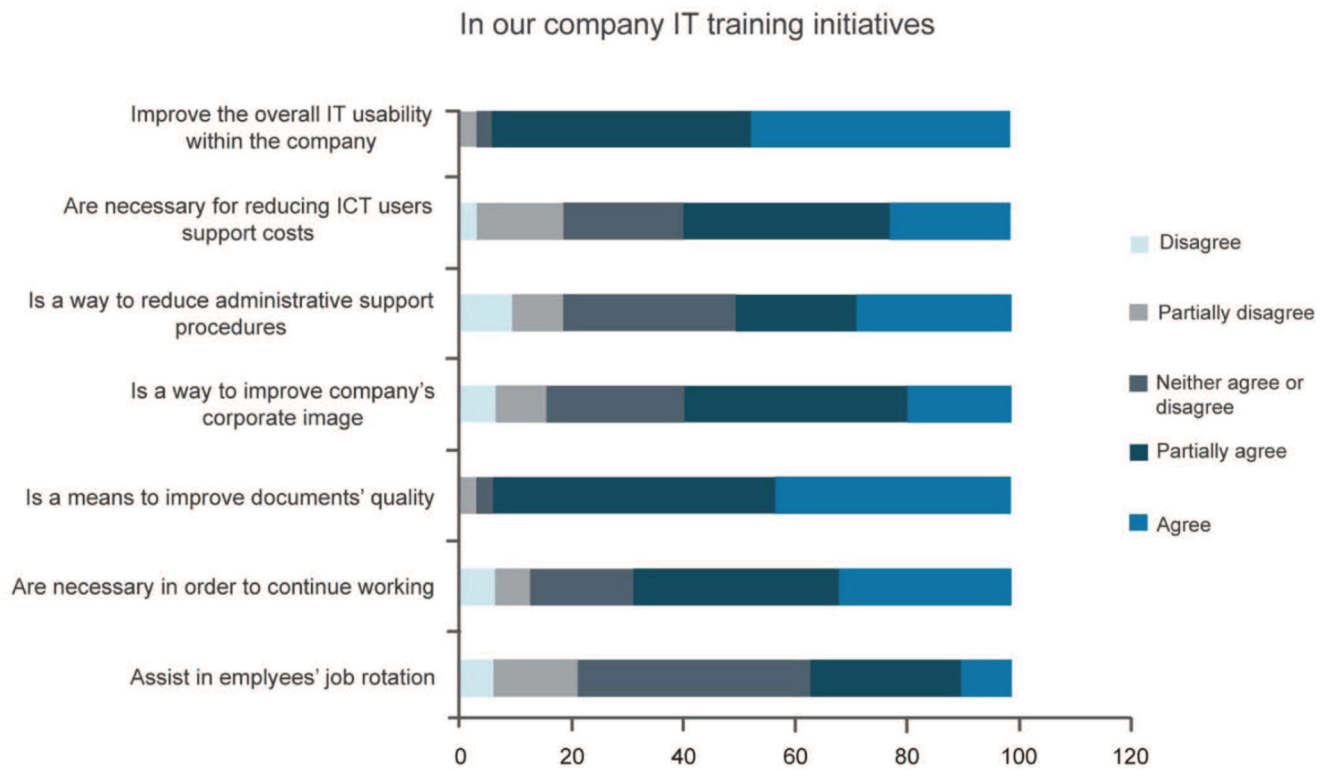


With regards to IT training, **91.2%** of HR managers believe that it has improved employees' productivity, **100%** agree or partially agree it has improved IT tools' usability, **46.9%** agree or partially agree it has reduced IT users support costs, **42.5%** agree or partially agree it has assisted employees in changing roles or functions (job rotation), **75.8%** agree or partially agree it has reduced the number of errors in the usage of IT systems,

**39.4%** agree or partially agree it has increased employees' willingness to help other colleagues, **51.6%** agree or partially agree it has helped re-engineering the organization, **24.3%** agree or partially agree it has developed emulation among basic and advanced IT users and **51.6%** agree or partially agree it has motivated other users to request IT training, as the graph shows below.

Graph 57: **HR managers' perceptions on IT training**
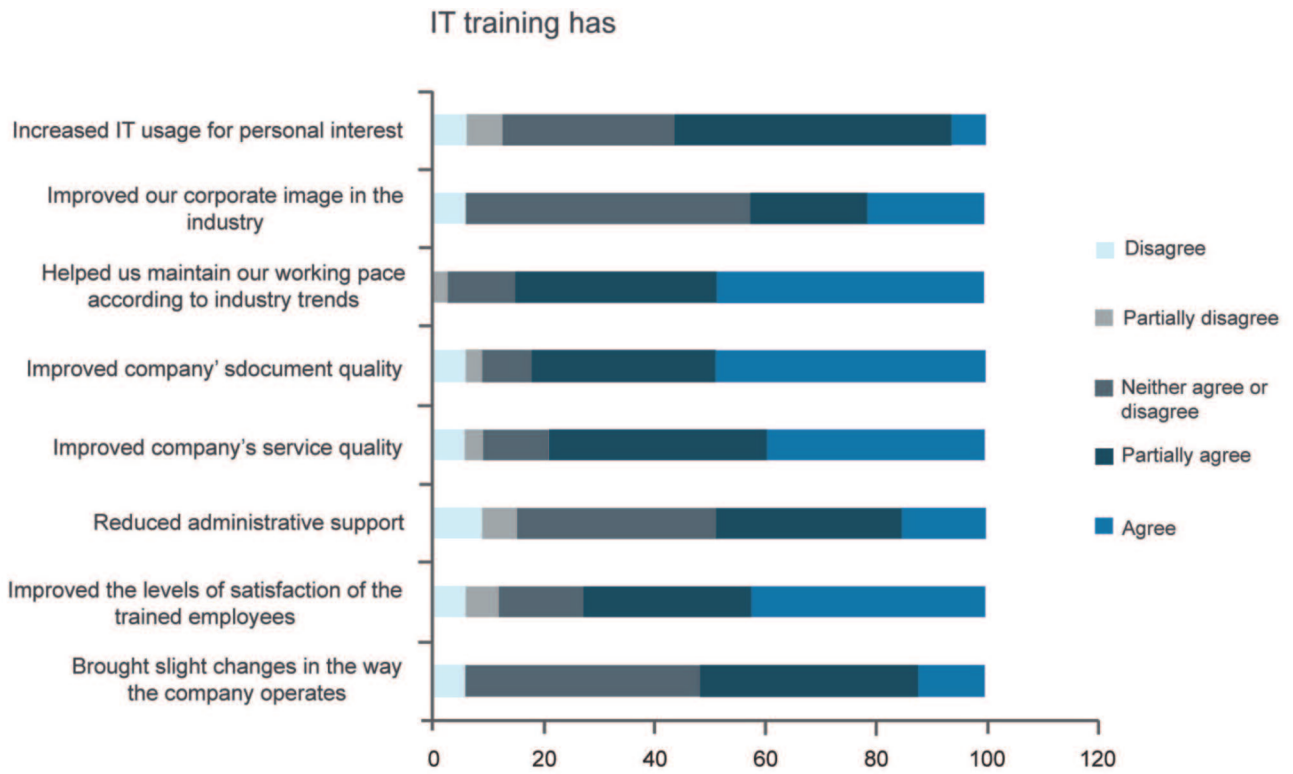
IT training has

- Motivated other users to request IT training
- Developed emulation among basic and advanced IT users
- Helped re-engineering the organization
- Increased employees' willingness to help other colleagues
- Reduced the number of errors in the usage of IT systems
- Assisted employees in changing roles or functions(job rotation)
- Reduced IT users support costs
- Improved IT tools' usability
- Improved employees' productivity

Legend:
- Disagree
- Partially disagree
- Neither agree or disagree
- Partially agree
- Agree

**51.5%** of HR managers responded that IT training has brought slight changes in the way the company operates, **72.7%** agree or partially agree it has improved the levels of satisfaction of the trained employees, **48.5%** agree or partially agree IT training has reduced administrative support, **78.8%** agree or partially agree IT training has improved company's service quality, **81.8%** agree or partially agree IT training has improved company's document quality,

**84.9%** agree or partially agree IT training has helped maintain working pace according to industry trends, **42.4%** agree or partially agree IT training has improved corporate image in the industry and **56.3%** agree or partially agree IT training has increased IT usage for personal interest, as the graph shows below.

## IT training has



It is interesting to note that although HR Managers in their majority recognize all the advantages of IT training, IT training budgets were slightly decreased and in their majority they don't intend to proceed with ECDL training & certification or other types of certifications (see graph 54)

Finally, regarding the question why IT training initiatives do not exist in their company, out of 18 respondents, **94.4%** of HR managers denied that the cost is the main reason. **55.5%** of them feel that employees have sufficient IT knowledge, **35.2%** agree or partially agree that it is difficult to distract employees from their job, **16.7%** partially agree that employees are not interested for such training, **5.9%** partially agree that existing training seminars are not sufficient to cover their needs and **35.3%** admit that IT training is not a priority, as the graph shows below.

## IT training initiatives do not exist in our company because
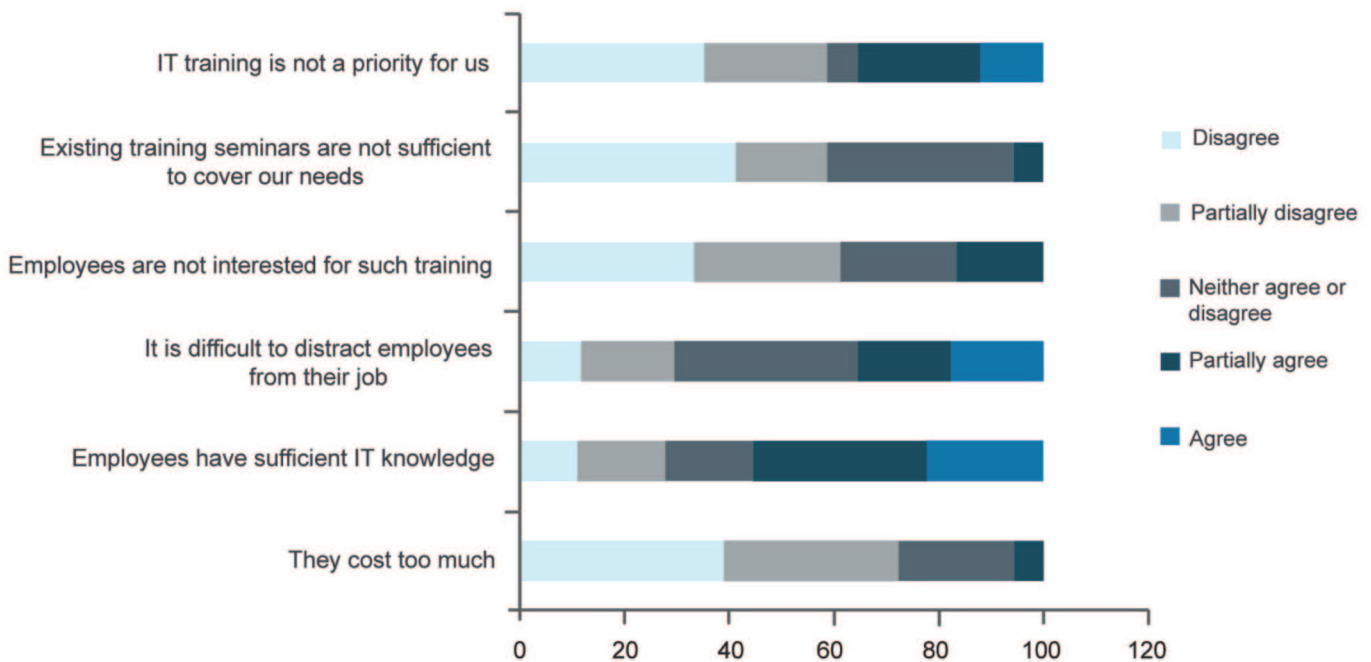


## 5.6 Analysis of the Questionnaire addressed to IT managers

IT managers within different industries provided us with the number of certified or advanced users of OFFICE. In total, **36.06%** of OFFICE users in the manufacturing (including construction) industry are certified or advanced users. Moreover, in services industry (including transport/logistics, education, tourism, banking), **34.52%** of OFFICE users are certified or advanced users.

With regards to the retail industry (including pharmaceuticals), **29.42%** of OFFICE users are certified or advanced users, as the graph below shows.

Graph 60: **Certified or advanced users of OFFICE**



36,06 Manufacturing
34,52 Services
29,42 Retail
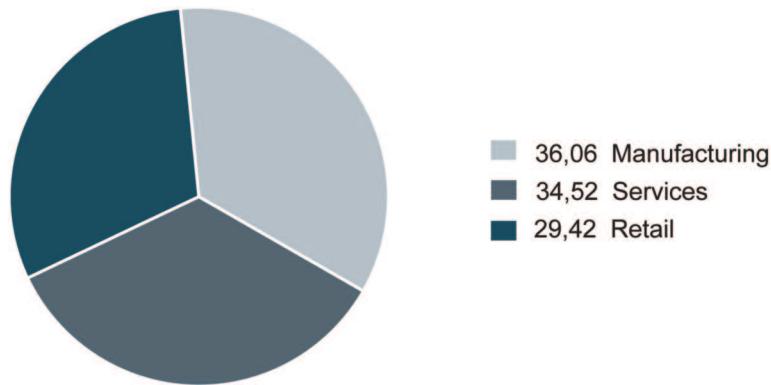
Certified or advanced users of Office

Regarding the company's investment on IT, **92.7%** of IT managers reported that everyone in the organization has access to Internet. **2.4%** o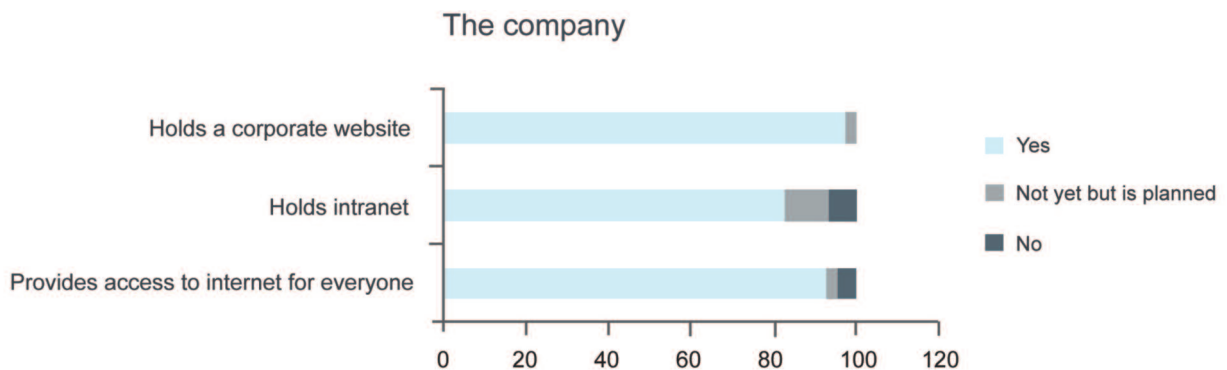f the respondents admitted lack of Internet access for everyone, while suggesting that there are plans to change this situation. **4.8%** admitted that not everyone in the organization has access to Internet.

82.9% of IT managers reported that their company has an Intranet. **9.8%** of IT managers admitted lack of Intranet, but there are plans to introduce one to the company, while **7.3%** admitted there is no Intranet in the organization and no plans for investing on such a service. **97.5%** of IT managers reported that their company has a website, while **2.4%** reported plans for creating one, as the graph shows below.

Graph 61**: IT managers' reports on company**



The company

Holds a corporate website
Holds intranet
Provides access to internet for everyone

Yes
Not yet but is planned
No

0    20    40    60    80    100    120

On average, **8.6** people are employed in the IT department within the participating companies, while the IT personnel cost is on average **372,668.27** Euros per year. On average, **6.8** hours per week and **354.09** hours per year are spent by the IT department to deal with OFFICE related queries. Each IT employee, who costs the company **43,478** Euros per year, spends **41.3** hours per year to deal with OFFICE related queries.

Considering that the average cost per hour per IT employee is **25.9** Euros, analysis of our findings suggests **that each year, the cost of an IT employee to deal with OFFICE related queries is 2,267.6** **Euros.** The table below represents the change in number of IT users between years 2007-2008 for 15 companies and the respective change in IT investment or IT personnel for a number of companies. Marked in red, one can see that increase in number of IT users, does not necessarily lead to increase in IT investment or IT personnel.

Table 4: **IT users-IT investment**

| COMPANY | Number of IT users 2007 | Number of IT users 2008 | % change | Total cost of IT 2007 | Total cost of IT 2008 | % change | Personnel Cost of IT employees 2007 | Personnel Cost of IT employees 2008 | % change |
|---|---|---|---|---|---|---|---|---|---|
| Services company 1 | 67 | 64 | -4,5 | 288000 | 408000 | 41,66 | 162000 | 170000 | 4,93 |
| Services company 2 | 120 | 128 | 6,7 | 50000 | 300000 | 500 | 125000 | 130000 | 4 |
| Manufacturing company 1 | 900 | 1000 | 11,1 | 3127000 | 3422000 | 9,43 | 2180000 | 2223000 | 1,97 |
| Manufacturing company 2 | 70 | 80 | 14,3 | 50000 | 50000 | 0 | 90000 | 95000 | 5,55 |
| Retail company 1 | 30 | 35 | 16,7 | 30000 | 30000 | 0 | 30000 | 50000 | 66,66 |
| Retail company 2 | 800 | 1130 | 41,3 | 8650000 | 5000000 | -42,19 | 243000 | 377000 | 55,14 |
| Manufacturing company 3 | 1412 | 1297 | -8,1 | 1600000 | 1700000 | 6,25 | 1104000 | 1203000 | 8,96 |
| Manufacturing company 4 | 72 | 80 | 11,1 | 194318,71 | 57053,52 | -70,63 | 46912,25 | 41778,04 | -10,94 |
| Services company 3 | 35 | 32 | -8,6 | 180000 | 180000 | 0 | 103194 | 127440 | 23,49 |
| Services company 4 | 290 | 315 | 8,6 | 125000 | 130000 | 4 | 73000 | 93400 | 27,94 |
| Retail company 3 | 155 | 158 | 1,9 | 438000 | 556000 | 26,94 | 606000 | 709000 | 16,99 |
| Services company 5 | 90 | 95 | 5,6 | 100000 | 100000 | 0 | 30000 | 30000 | 0 |
| Services company 6 | 115 | 128 | 11,3 | 149000 | 125000 | -16,10 | 62089 | 65830 | 6,02 |
| Services company 7 | 120 | 140 | 16,7 | 220000 | 250000 | 13,63 | 250000 | 300000 | 20 |
| Retail company 4 | 280 | 300 | 7,1 | 1000000 | 900000 | -10 | 380000 | 400000 | 5,26 |

More specifically, by grouping companies according to the number of employees, we can see that the increase in the number of OFFICE users, does not necessarily lead to a proportionate increase in personnel.

For example, companies with less than **50** OFFICE users would employ on average **2** IT people, and spend **6** hours on average to solve OFFICE related problems, while the same applies to companies with **51-100** OFFICE users who would spend **4.5** hours on average to solve OFFICE related problems.

Also, companies with **101-250** OFFICE users would employ on average **6.4** IT people and spend **10.7** hours on average to solve OFFICE related problems, while companies with **251-500** OFFICE users would employ a few more, **8.3** IT people and spend fewer hours on average to solve OFFICE related problems.

Table 5: **IT users-IT investment**

| Number of employees/users of IT | Average number of IT employees | Average Number of hours spent solving OFFICE difficulties |
|---|---|---|
| 1-50 employees | 2 | 6 |
| 51-100 employees | 2 | 4,5 |
| 101-250 employees | 6,4 | 10,7 |
| 251-500 employees | 8,3 | 4,1 |
| 500+ | 34,4 | 39,8 |

# 6. Discussion

Despite the increased demand for skilled ICT practitioners, the Greek market faces a serious and increasing undersupply of ICT practitioners and at the same time, an increased cost related to digital ignorance, which remains underexplored. In order to address this gap, the current survey has measured the cost of digital ignorance for companies, which includes:

- The cost of employees trying to solve OFFICE related queries

- The cost of IT personnel helping employees to solve OFFICE related queries

Initially, candidates from various industries that participated in our research took a mock test prepared by ECDL HELLAS to assess their skills on either WORD/EXCEL/POWERPOINT/ ACCESS. At the same time, their perceptions on their IT skills were reported. Perceptions of immediate supervisors on their employees' skills were also reported. It was found that in each application, on average, candidates and supervisors systematically overestimated their IT skills. A basic problem with skills' overestimation could be related to underestimation of the real cost of digital ignorance, and lack or initiative to deal with this problem.

The cost of digital ignorance is partly related to time spent by the employee to solve an OFFICE related query and has been measured to be **755.55 Euros per year for each employee. <u>Once the above number is multiplied by the number of employees in an organization, the minimum cost of IT skills ignorance can be calculated.</u>** In addition, from reporting how employees handle OFFICE related difficulties, there is an additional cost related to the time colleagues or the IT department spend to help the employee solve his/her query.

Participants received one month training by ECDL HELLAS and then took the ECDL test. Their performance was significantly improved, which is evident not only in the test results, which were much higher and closer to candidates' original perceptions, but also to time spent to handle OFFICE related difficulties. **<u>A great amount of time was saved trying to solve problems on either WORD/EXCEL/ POWERPOINT/ ACCESS after candidates received training and certification,</u>** which in turn decreased the cost of digital ignorance.

Apart from the direct cost saved, the majority of candidates perceive that training and certification has improved:

- work efficiency
- use of knowledge acquired during training
- job satisfaction
- work relations with colleagues
- organizational loyalty
- employability in the labor market
-  career prospects in the organization

Supervisors, on average, agreed that training and certification could improve the above factors for candidates and stressed the importance of IT skills for recruitment. Supervisors also reported considerable improvement in overall performance of candidates after they received training and certification, and specifically on:

- speed
- appearance and presentation of a report
- reduction of errors
- usage of more applications
- accuracy/attention to detail

**The time supervisors spend to help candidates solve IT difficulties, after they received training and certification, was considerably decreased.**

HR managers that also participated in our research reported the annual training cost per employee and the annual IT training cost for the years 2006-2008. Comparing and contrasting results, allowed us to assume that while there was an increase in investment from 2006 to 2007, it was followed by a decrease in training cost and IT training cost in 2008.

With regards to ECDL training and certification, it is widely known among HR managers and their employees, while they do not consider obtaining it of high importance. The majority of HR managers admitted that it is neither a priority to obtain ECDL certification or any other type of IT certification, despite admitting that IT training initiatives could have a number of positive effects on employees, including:

- decrease the skills' gap among the users
- improve employees' satisfaction
- consider it as a reward for achieving individual goals
- assist in employees' job rotation
- a means to improve documents' quality
- improve company's corporate image
- reduce administrative support procedures
- reducing ICT users support costs
- improve the overall IT usability within the company

HR managers admitted that IT training where applied, has:

- improved employees' productivity
- reduced IT users support costs
- assisted employees in changing roles or functions
- reduced the number of errors in the usage of IT systems
- helped re-engineering the organization
- motivated other users to request IT training
- brought slight changes in the way the company operates
- improved the levels of satisfaction of the trained employees
- improved company's service quality
- improved company's document quality
- helped maintain working pace according to industry trends
- increased IT usage for personal interest.

Given the numerous benefits HR managers acknowledge that IT training can bring to the organization, it is surprising that investment in IT decreases each year. While one could consider the global financial crisis as the main reason, HR managers denied that the cost is the main reason. Among the explanations given by HR managers, **we noted that they feel that employees have sufficient IT knowledge. It worth's reminding that the survey has already highlighted the impressive gap between supervisors' estimation of their employees IT skills and their actual skills.**

IT managers reported actual figures regarding the low number of skilled and certified OFFICE users in various industries, including manufacturing, services and retail, despite the wide use of Internet in organizations. According to our findings, the number of employees in an organization increases disproportionally to the number of IT people or the investment in IT. However, according to the survey, **the cost of an IT employee to deal with OFFICE related queries is 2,267.6 Euros per year.** The above cost needs to be added to the cost estimated per employee to solve an OFFICE related query, which is **755.55 Euros per year.**

Overall, this survey has measured the **minimum cost** of digital ignorance in the Greek market. Moreover, it has showed how IT training and certification has improved IT skills and overall performance of employees and how it has managed to decrease the cost of digital ignorance. In addition, the survey has presented the views and perceptions of employees, supervisors, HR managers and IT managers on the value of IT training and certification. It has also given an overview of the current investment of Greek industries on IT training and personnel. It is more than clear that IT skills have already made a significant impact on labor market across all industries over the last years and therefore are of utmost importance in the today's world. In order to sustain Europe's competitive advantage in the globalized economy it is more than necessary to increase the number of IT skilled professionals and of course to employ e-skills in order to drive innovation.

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## Annex 1

# Questionnaires

In Annex1, the questionnaires distributed to candidates and supervisors before and after ECDL training and certification are presented as well as the questionnaires given to HR and IT managers. Questionnaires on either WORD/EXCEL/POWERPOINT/ACCESS are identical, just focusing on each specific application, so we only give an example of the questionnaires in WORD.

## Questionnaire 1: Addressed to candidates before ECDL training and certification

Αξιότιμε κύριε/ κυρία

Το παρόν ερωτηματολόγιο σας αποστέλλεται στα πλαίσια της έρευνας για τη μέτρηση της αποδοτικότητας των εργαζομένων στη χρήση Η/Υ έπειτα από εκπαίδευση σε ένα από τα 4 ακόλουθα πεδία: WORD, EXCEL, POWER POINT, ACCESS. Η εν λόγω έρευνα που διενεργεί το τμήμα Εφαρμοσμένης έρευνας και Καινοτομίας του ALBA Κολλέγιο Διοίκησης Επιχειρήσεων σε συνεργασία με την ECDL HELLAS περιλαμβάνει 3 φάσεις. Στην πρώτη φάση οι εργαζόμενοι θα συμπληρώσουν το παρόν ερωτηματολόγιο όπου θα καταγράψουμε τις αδυναμίες που τυχόν υπάρχουν στην καθημερινή χρήση της συγκεκριμένης ενότητας του OFFICE. Στην συνέχεια οι εργαζόμενοι θα εκπαιδευτούν στην ενότητα που έχει οριστεί για τον καθένα και θα πιστοποιήσουν τις γνώσεις τους στην τελική εξέταση. Στην 3η φάση της έρευνας οι εργαζόμενοι θα συμπληρώσουν ένα μήνα μετά την πιστοποίηση τους ένα 2ο ερωτηματολόγιοόπου θα διερευνηθεί πως η απόδοση τους βελτιώθηκε έπειτα από την εκπαίδευση. Σας ευχαριστούμε για το χρόνο που θα διαθέσετε για τη συμπλήρωση του ερωτηματολογίου και για τη συμμετοχή σας στην έρευνα.

**Στοιχεία Υποψήφιου: Όνομα:**

**Όνομα εταιρίας:**

Θέση στην εταιρεία _____

Φύλο _____

Ηλικία _____

1. Έχετε λάβει εκπαίδευση σε Η/Υ;

   ΝΑΙ [ ]      ΟΧΙ [ ]

   Πώς θα αξιολογούσατε τις γνώσεις σας στη χρήση Η/Υ;

   *(σημειώστε με Χ στο αντίστοιχο κουτάκι) :*

| | Διαφωνώ | Διαφωνώ Μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| 2. Οι γνώσεις μου στη χρήση εφαρμογών OFFICE είναι επαρκείς | | | | | |
| 3. Οι γνώσεις μου στη χρήση WORD είναι επαρκείς | | | | | |
| 4. Χειρίζομαι το excel, powerpoint το ίντερνετ και το ηλεκτρονικό ταχυδρομείο με μεγάλη άνεση | | | | | |
| 5. Σπάνια συναντώ δυσκολίες όταν επεξεργάζομαι κείμενα στο WORD | | | | | |

6. Πόσες ώρες ημερησίως χρησιμοποιείτε WORD;

1 ☐   2 ☐   3 ☐   4 ☐   5 ☐   6 ☐   7 ☐   8 ☐

7. Όταν αντιμετωπίζετε δυσκολίες στο WORD τι κάνετε; (βάλτε σε προτεραιότητα τις παρακάτω 6 επιλογές, σημειώστε 1 για την επιλογή που χρησιμοποιείτε περισσότερο και 6 για την επιλογή που σπάνια χρησιμοποιείτε)

α) χρησιμοποιώ το help του office          ☐

β) ρωτάω συνάδελφο/προϊστάμενο          ☐

γ) ρωτάω το τμήμα IT          ☐

δ) προσπαθώ να βρω τη λύση μόνος/η μου          ☐

ε) Ψάχνω στο ίντερνετ την λύση          ☐

στ) προσπερνώ          ☐

8. Πόσες ώρες εβδομαδιαίως δαπανάτε για να επιλύσετε δυσκολίες στο WORD;

------- (λεπτά)          ή          ------- (ώρες)

9. Πόσα χρόνια χρησιμοποιείτε το WORD συνολικά;

Λιγότερο από ένα χρόνο          ☐

1-2 χρόνια          ☐

2-5 χρόνια          ☐

Πάνω από 5 χρόνια          ☐

10. Θεωρείτε ότι χρειάζεστε περαιτέρω εκπαίδευση στη χρήση WORD;

              NAI    ☐               OXI    ☐

11. Αν ΝΑΙ σε ποια συγκεκριμένα πεδία; Σας παραθέτουμε ενδεικτικά κάποιες εφαρμογές: Format text, Use paragraph formatting, Use spell checking, Create bulleted or numbered lists, Insert headers and footers, Insert page numbers, Preview pages before printing, Insert a table, Create a mail merge, Insert graphics κλπ

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## Questionnaire 2: Addressed to candidates after ECDL training and certification

**Στοιχεία Υποψήφιου:**

**Όνομα:**

**Όνομα εταιρίας:**

Θέση στην εταιρεία _____

Φύλο           _____

1. Πώς θα αξιολογούσατε τις γνώσεις σας στη χρήση WORD <u>μετά</u> την εκπαίδευση και πιστοποίηση που λάβατε:

   *(σημειώστε με Χ στο αντίστοιχο κουτάκι)*

| | Διαφωνώ | Διαφωνώ Μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ Μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| Οι γνώσεις μου στη χρήση WORD είναι επαρκείς | | | | | |

2. Πόσες ώρες εβδομαδιαίως δαπανάτε για να επιλύσετε δυσκολίες στο WORD;

   ------- (λεπτά)

   ------- (ώρες)

   Παρακαλώ σημειώστε εάν συμφωνείτε στις ακόλουθες δηλώσεις:

| | Διαφωνώ | Διαφωνώ Μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| 3. Θεωρώ ότι έχει αυξηθεί η αποδοτικότητά μου στο WORD μετά την εκπαίδευση που έλαβα | | | | | |
| 4. Πολλά από αυτά που έμαθα στην εκπαίδευση τα εφαρμόζω στη δουλειά μου | | | | | |
| 5. Θεωρώ ότι η εκπαίδευση και πιστοποίηση που έλαβα στο WORD βελτίωσε την εργασιακή μου ικανοποίηση | | | | | |
| 6. Θεωρώ ότι η εκπαίδευση που έλαβα στο WORD βελτίωσε την σχέση μου με συναδέλφους | | | | | |
| 7. Θεωρώ ότι η εκπαίδευση και πιστοποίηση που έλαβα στο WORD βελτίωσε την αφοσίωση μου στον οργανισμό | | | | | |
| 8. Θεωρώ ότι η εκπαίδευση και πιστοποίηση που έλαβα στο WORD βελτίωσε την ανταγωνιστικότητα μου στην αγορά εργασίας | | | | | |
| 9. Θεωρώ ότι η εκπαίδευση και πιστοποίηση που έλαβα στο WORD βελτίωσε τις προοπτικές της καριέρας μου μέσα στον οργανισμό | | | | | |
| 10. Είμαι ικανοποιημένος/η από την εκπαίδευση και πιστοποίηση που έλαβα | | | | | |
| 11. Χρειάζομαι περαιτέρω εκπαίδευση στο WORD | | | | | |

12. Σε ποια άλλα πεδία θεωρείτε ότι χρειάζεστε εκπαίδευση και θα επιθυμούσατε να πιστοποιηθείτε;

Excel ☐

Power Point ☐

Access ☐

Internet ☐

Άλλο_____

## Questionnaire 3: Addressed to supervisors before ECDL training and certification

Αξιότιμε κύριε/ κυρία

Το παρόν ερωτηματολόγιο σας αποστέλλεται στα πλαίσια της έρευνας για τη μέτρηση της αποδοτικότητας των εργαζομένων στη χρήση Η/Υ έπειτα από εκπαίδευση σε ένα από τα 4 ακόλουθα πεδία: WORD, EXCEL, POWER POINT, ACCESS. Η εν λόγω έρευνα που διενεργεί το τμήμα Εφαρμοσμένης έρευνας και Καινοτομίας του ALBA Κολλέγιο Διοίκησης Επιχειρήσεων σε συνεργασία με την ECDL HELLAS περιλαμβάνει 3 φάσεις. Στην πρώτη φάση οι άμεσοι συνεργάτες των εργαζομένων που θα εκπαιδευτούν, θα συμπληρώσουν το παρόν ερωτηματολόγιο όπου θα αξιολογήσουν τις γνώσεις των συνεργατών τους στην καθημερινή χρήση της

συγκεκριμένης ενότητας του OFFICE. Στην συνέχεια οι εργαζόμενοι θα εκπαιδευτούν στην ενότητα που έχει οριστεί για τον καθένα και θα πιστοποιήσουν τις γνώσεις τους στην τελική εξέταση. Στην 3$^η$ φάση της έρευνας οι υπεύθυνοι των εργαζομένων θα συμπληρώσουν ένα μήνα μετά την πιστοποίηση ένα 2$^ο$ ερωτηματολόγιο όπου θα διερευνηθεί πως η απόδοση των συνεργατών τους βελτιώθηκε έπειτα από την εκπαίδευση. Σας ευχαριστούμε για το χρόνο που θα διαθέσετε για τη συμπλήρωση του ερωτηματολογίου και για τη συμμετοχή σας στην έρευνα.

**Στοιχεία Supervisor: Όνομα:**

**Όνομα εταιρίας:**

Θέση στην εταιρεία _____

Φύλο _____

1. Πόσα χρόνια είστε προϊστάμενος του ατόμου που θα εκπαιδευτεί και θα πιστοποιηθεί στο WORD;

   α) Λιγότερο από 1 χρόνο    ☐

   β) 1-2 χρόνια    ☐

   γ) 2-5 χρόνια    ☐

   δ) 5 έως 10 χρόνια    ☐

   ε) πάνω από 10 χρόνια    ☐

2. Πώς θα αξιολογούσατε τις γνώσεις του υποψηφίου στη χρήση WORD:

   *(σημειώστε με Χ στο αντίστοιχο κουτάκι)*

| | Διαφωνώ | Διαφωνώ Μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| Οι γνώσεις του υποψήφιου στη χρήση WORD είναι επαρκείς | | | | | |

3. Θεωρείτε ότι ο υποψήφιος χρειάζεται περαιτέρω εκπαίδευση στη χρήση WORD;

   ΝΑΙ    ☐        ΟΧΙ    ☐

4. Αν ΝΑΙ σε ποια συγκεκριμένα πεδία; Σας παραθέτουμε ενδεικτικά κάποιες εφαρμογές: Format text, Use paragraph formatting, Use spell checking, Create bulleted or numbered lists, Insert headers and footers, Insert page numbers, Preview pages before printing, Insert a table, Create a mail merge, Insert graphics κλπ

5. Σας έχει ζητηθεί από τον ίδιο τον υποψήφιο στο παρελθόν να εκπαιδευτεί σε WORD;

   ΝΑΙ    ☐        ΟΧΙ    ☐

6. Έχει απευθυνθεί ο υποψήφιος σε εσάς για να του υποδείξετε λύσεις σε τυχόν δυσκολίες στη χρήση WORD;

NAI ☐                    OXI ☐

7. Αν ΝΑΙ πόσο συχνά <u>εβδομαδιαίως</u>;

α) 1-2 φορές ☐

β) 3-5 φορές ☐

γ) πάνω από 5 φορές ☐

| | Διαφωνώ | Διαφωνώ Μερικώς | Οὐτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| 8. Θεωρείτε ότι συμμετέχοντας στην εκπαίδευση ο υποψήφιος θα βελτιώσει την εργασιακή του ικανοποίηση | | | | | |
| 9. Θεωρείτε ότι συμμετέχοντας στην εκπαίδευση ο υποψήφιος θα βελτιώσει τις σχέσεις του με συναδέλφους | | | | | |
| 10. Θεωρείτε ότι συμμετέχοντας στην εκπαίδευση ο υποψήφιος θα αυξήσει την αφοσίωση του στον οργανισμό | | | | | |
| 11. Θεωρείτε ότι συμμετέχοντας στην εκπαίδευση ο υποψήφιος θα βελτιώσει την ανταγωνιστικότητα του στην αγορά εργασίας | | | | | |
| 12. Θεωρείτε ότι συμμετέχοντας στην εκπαίδευση ο υποψήφιος θα βελτιώσει τις προοπτικές της καριέρας του μέσα στον οργανισμό | | | | | |
| 13. Είναι σημαντική για εσάς η πιστοποίηση γνώσεων πληροφορικής προκειμένου να προσλάβετε κάποιον συνεργάτη σας | | | | | |

**Questionnaire 4: Addressed to supervisors after ECDL training and certification**


**Στοιχεία Supervisor: Όνομα:**

**Όνομα εταιρίας:**

Θέση στην εταιρεία _____

Φύλο _____

Πώς θα αξιολογούσατε τις γνώσεις του συνεργάτη σας στη χρήση WORD <u>μετά</u> την εκπαίδευση και πιστοποίηση:

*(σημειώστε με Χ στο αντίστοιχο κουτάκι):*

| | Διαφωνώ | Διαφωνώ Μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| 1. Οι γνώσεις του/της στη χρήση WORD είναι επαρκείς | | | | | |

2. Παρατηρείται βελτίωση στα παρακάτω χαρακτηριστικά του/της που σχετίζονται με τη χρήση WORD:

| | Διαφωνώ | Διαφωνώ Μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| α) ταχύτητα | | | | | |
| β) εμφάνιση/παρουσίαση παραδοτέου | | | | | |
| γ) μείωση λαθών | | | | | |
| δ) χρήση περισσότερων εφαρμογών (μορφοποίηση κειμένου) | | | | | |
| ε) ακρίβεια/προσοχή στη λεπτομέρεια | | | | | |

3. Μετά την εκπαίδευση και πιστοποίηση έχει απευθυνθεί ο υποψήφιος σε εσάς για να του υποδείξετε λύσεις σε τυχόν δυσκολίες στη χρήση WORD;

NAI ☐                OXI ☐

4. Αν ΝΑΙ πόσο συχνά <u>εβδομαδιαίως</u>;

α) 1-2 φορές ☐

β) 3-5 φορές ☐

γ) πάνω από 5 φορές ☐

*(σημειώστε το αντίστοιχο κουτάκι εάν συμφωνείτε στις ακόλουθες δηλώσεις):*

| | Διαφωνώ | Διαφωνώ Μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ Μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| 5. Θεωρώ ότι ο υποψήφιος μετά την εκπαίδευση/πιστοποίηση έχει καλύτερες προοπτικές καριέρας μέσα στην εταιρεία | | | | | |
| 6. Θεωρώ ότι ο υποψήφιος μετά την εκπαίδευση/πιστοποίηση βελτίωσε την ανταγωνιστικότητά του στην αγορά εργασίας | | | | | |
| 7. Τον τελευταίο μήνα στη συνεργασία μας έχει παρατηρηθεί βελτίωση στην εργασιακή του/της ικανοποίηση | | | | | |
| 8. Τον τελευταίο μήνα στη συνεργασία μας έχει παρατηρηθεί βελτίωση στην σχέση του/της με συναδέλφους | | | | | |
| 9. Τον τελευταίο μήνα στη συνεργασία μας έχει παρατηρηθεί αύξηση στην αφοσίωση του/της στον οργανισμό | | | | | |

## Questionnaire 5: Addressed to HR managers

**Όνομα Εταιρείας:**

Εταιρική επωνυμία ………………….

Διεύθυνση ιστοσελίδας στο διαδίκτυο ………………

Κλάδος δραστηριότητας ………………….

65

Θέση στην εταιρία

Τηλέφωνο απευθείας

Ποσοτικά στοιχεία

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| 1 | Αριθμός προσωπικού | | | |
| 2 | Αριθμός προσωπικού που χρησιμοποιεί ατομικές εφαρμογές πληροφορικής (π.χ. επεξεργασία κειμένου, , υπολογιστικά φύλλα, βάσεις δεδομένων, κλπ.). | | | |
| 3 | Ετήσιο κόστος εκπαίδευσης (σε χιλιάδες ευρώ). | | | |
| 4 | Ετήσιο κόστος εκπαίδευσης ατομικές εφαρμογές πληροφορικής (π.χ. Office, υπολογιστικά φύλλα, κλπ.) (σε χιλιάδες ευρώ) | | | |

Το διεθνές πιστοποιητικό πληροφορικής (ECDL):

Ναι      Οχι

5. Είναι διαδεδομένο ανάμεσα στους υπαλλήλους μας
6. Οι νεοπροσληφθέντες πρέπει να κατέχουν πιστοποίηση ECDL.
7. Υπάρχει η σκέψη να οργανωθούν τμήματα παρακολούθησης εκπαίδευσης χρήσης Η/Υ που να οδηγούν σε πιστοποίηση ECDL.
8. Στην εταιρεία μας αναζητούνται άλλου είδους πιστοποιήσεις πληροφορικής.

| | |
|---|---|
| | |
| | |
| | |
| | |

Εάν η εταιρεία δεν έχει προβεί σε εκπαίδευση σε θέματα πληροφορικής, περάστε απευθείας στην ερώτηση

Στην εταιρεία μας οι πρωτοβουλίες εκπαίδευσης σε θέματα πληροφορικής:

*(σημειώστε με Χ στο αντίστοιχο κουτάκι εάν συμφωνείτε με τις ακόλουθες δηλώσεις) :*

| | Διαφωνώ | Διαφωνώ μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| 9. Είναι αντικείμενο ενός ετήσιου πλάνου εκπαίδευσης | | | | | |
| 10. Πραγματοποιούνται κατόπιν αιτήματος των υποψηφίων | | | | | |
| 11.Πραγματοποιούνται κατόπιν αιτήματος των προϊσταμένων των υποψηφίων | | | | | |
| 12 Είναι συνδεδεμένη με το ετήσιο πλάνο ανάπτυξης του υποψηφίου | | | | | |
| 13 Θεωρείται επιβράβευση για την επίτευξη στόχων | | | | | |
| 14 Βελτιώνουν την ικανοποίηση των υπαλλήλων | | | | | |
| 15 Στοχεύουν στην μείωση του χάσματος ικανοτήτων ανάμεσα στους χρήστες | | | | | |
| 16 Βοηθούν στην μετακίνηση των εργαζομένων σε άλλες αρμοδιότητες ή άλλα τμήματα | | | | | |
| 17 Θεωρούνται αναγκαιότητα για να συνεχίσουμε να δουλεύουμε | | | | | |
| 18. Είναι ένα μέσο για τη βελτίωση της ποιότητας των παραγόμενων εγγράφων | | | | | |
| 19. Είναι ένας τρόπος βελτίωσης της εταιρικής μας εικόνας προς τα έξω | | | | | |
| 20 Είναι ένας τρόπος να μειώσουμε την γραμματειακή Υποστήριξη | | | | | |
| 21 Είναι απαραίτητες για να μειώνονται τα κόστη υποστήριξης στους χρήστες πληροφορικής | | | | | |
| 22. Καταλήγουν να βελτιώσουν την χρήση πληροφορικής στην εταιρεία | | | | | |

Σκεφτείτε τώρα τα αποτελέσματα των πρωτοβουλιών εκπαίδευσης της πληροφορικής που έχετε πραγματοποιήσει στην εταιρεία σας.

Η εκπαίδευση σε θέματα πληροφορικής στην εταιρεία μας έχουν:

*(σημειώστε το αντίστοιχο κουτάκι εάν συμφωνείτε στις ακόλουθες δηλώσεις):*

| | Διαφωνώ | Διαφωνώ μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| 23 Βελτιώσει την παραγωγικότητα του προσωπικού μας | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 24  Επιτρέψει να χρησιμοποιούν οι χρήστες καλύτερα τα εργαλεία πληροφορικής | | | | | |
| 25  Μειώσει τα κόστη υποστήριξης στους χρήστες των συστημάτων πληροφορικής | | | | | |
| 26  Βοηθήσει στην τοποθέτηση του προσωπικού σε διάφορες νέες αρμοδιότητες ή νέα τμήματα (job rotation) | | | | | |
| 27  Μειώσει τα λάθη στη χρήση των συστημάτων πληροφορικής | | | | | |
| 28  Αυξήσει την προθυμία των χρηστών να βοηθήσουν τους συναδέλφους τους | | | | | |
| 29  Βοηθήσει στην αναδιοργάνωση των διαδικασιών της επιχείρησης | | | | | |
| 30  Δημιουργήσει ευγενή άμιλλα ανάμεσα στους βασικούς χρήστες και στους εξειδικευμένους χρήστες των συστημάτων πληροφορικής | | | | | |
| 31  Κινητοποιήσει και άλλους χρήστες ώστε να ζητούν εκπαίδευση στην πληροφορική | | | | | |
| 32  Φέρει μικρές αλλαγές στον τρόπο που λειτουργεί η εταιρεία | | | | | |
| 33 Βελτιώσει την ικανοποίηση του εκπαιδευόμενου Προσωπικού | | | | | |
| 34 Μειώσει την γραμματειακή υποστήριξη | | | | | |
| 35 Βελτιώσει την ποιότητα των υπηρεσιών μας | | | | | |
| 36 Βελτιώσει την ποιότητα των εγγράφων μας | | | | | |
| 37 Βοηθήσει να διατηρήσουμε τους ρυθμούς εργασίας σύμφωνα με τις σύγχρονες τάσεις στον κλάδο μας | | | | | |
| 38 Βελτιώσει την εταιρική μας εικόνα στον κλάδο | | | | | |
| 39  Αυξήσει τη χρήση της πληροφορικής για προσωπικά ενδιαφέροντα | | | | | |

Εάν η εταιρεία δεν έχει πρωτοβουλίες εκπαίδευσης της πληροφορικής, απαντήστε στις ακόλουθες ερωτήσεις.

Στην εταιρεία μας οι πρωτοβουλίες εκπαίδευσης της πληροφορικής  δεν υπάρχουν γιατί: *(σημειώστε το κουτάκι εάν συμφωνείτε με τις παρακάτω δηλώσεις)*

| | Διαφωνώ | Διαφωνώ μερικώς | Ούτε συμφωνώ/ ούτε διαφωνώ | Συμφωνώ μερικώς | Συμφωνώ |
|---|---|---|---|---|---|
| 40 Είναι πολύ ακριβές | | | | | |
| 41 Οι γνώσεις πληροφορικής του προσωπικού είναι επαρκείς | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 42 Είναι δύσκολο να αποσπάσουμε το προσωπικό από την εργασία του | | | | | |
| 43 Γιατί το προσωπικό δε ενδιαφέρεται για τέτοιου είδους εκπαίδευση | | | | | |
| 44 Τα διάφορα εκπαιδευτικά σεμινάρια της αγοράς δεν είναι επαρκή για το επίπεδο των αναγκών μας | | | | | |
| 45 Η εκπαίδευση στην πληροφορική δεν είναι προτεραιότητα της εταιρείας | | | | | |
| 46 Άλλο (αναφέρετε συγκεκριμένα) | | | | | |

## **Questionnaire 6: Addressed to IT managers**

**Στοιχεία της εταιρείας**

Επωνυμία ………………….

Κλάδος δραστηριότητας ……………….

Θέση στην εταιρεία ……………..

Ποσοτικά στοιχεία

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| 1 | Αριθμός χρηστών πληροφορικής (ατομικές εφαρμογές, διαχείριση SW, σύστημα CAD, κλπ.) | | | |
| 2 | Αριθμός προσωπικού που χρησιμοποιεί ατομικές εφαρμογές πληροφορικής (π.χ. επεξεργασία κειμένου, , υπολογιστικά φύλλα, βάσεις δεδομένων, κλπ.). | | | |

Αναφερόμενοι στους χρήστες ατομικών εφαρμογών πληροφορικής (office), να αναφέρετε το επίπεδο των ικανοτήτων που κατέχουν :

| | | |
|---|---|---|
| 3 | Βασικοί χρήστες (Βασικές Δεξιότητες πληροφορικής) | |
| 4 | Χρήστες με δίπλωμα (πιστοποίηση) ή πεπειραμένοι χρήστες  * | |
| | Σύνολο | 100% |

* Εάν δεν γνωρίζετε τον ακριβή αριθμό πιστοποιημένων χρηστών παρακαλώ συμβουλευτείτε το τμήμα προσωπικού

Οι χρήστες των ατομικών εφαρμογών πληροφορικής ανήκουν στις ακόλουθες κατηγορίες επαγγελματιών:                                                                                 %

| | | | |
|---|---|---|---|
| 5 | Γραμματείς | | |

| 6 | Υπάλληλοι ή επαγγελματίες | |
|---|---|---|
| 7 | Εργάτες και τεχνικοί (τεχνίτες) | |
| 8 | Διευθυντές | |
| 9 | Άλλο (να αναφέρετε συγκεκριμένα) | |
| | Σύνολο | 100% |

Να αναφέρετε το ποσοστό των ατομικών χρηστών πληροφορικής που χρησιμοποιούν τις ακόλουθες εφαρμογές : %

| 10 | Windows ή άλλο λειτουργικό σύστημα | |
|---|---|---|
| 11 | Word ή άλλο επεξεργαστή κειμένου | |
| 12 | Excel ή άλλα υπολογιστικά φύλλα | |
| 13 | Powerpoint ή άλλη εφαρμογή για παρουσιάσεις | |
| 14 | Access ή άλλες εφαρμογές διαχείρισης βάσης δεδομένων | |
| 15 | Ηλεκτρονικό ταχυδρομείο | |
| 16 | Browser για Internet | |

Η υποδομή μας στην πληροφορική σήμερα είναι η εξής:

17    Αριθμός (ποσότητα) server ………………….

18    Desktops ……………………………..

19    Φορητοί υπολογιστές για υπαλλήλους/διοίκηση …………………..

20    Ποσοστό χρηστών του internet ………………………..

21    Ταχύτητα σύνδεσης στο internet bandwidth (bps) για την πρόσβαση των χρηστών  ……………………

Τα πληροφοριακά μας συστήματα είναι τα ακόλουθα
(σημειώστε με Χ στο αντίστοιχο κουτάκι):

| Υπάρχει | Δεν υπάρχει αλλά έχει σχεδιαστεί | Δεν υπάρχει |
|---|---|---|
| | | |

|  |  |  |  |
|---|---|---|---|
| 22 | Εταιρικό δίκτυο (LAN/WAN) |  |  |
| 23 | Πρόσβαση στο internet για όλους τους Η/Υ |  |  |
| 24 | Intranet |  |  |
| 25 | Ιστοσελίδα στο διαδίκτυο |  |  |

Οικονομικά στοιχεία

|  | 2006 | 2007 | 2008 |
|---|---|---|---|
| 26 Ετήσια συνολικά εταιρικά κόστη πληροφορικής (κόστη πληροφορικής που ελέγχονται από το IT τμήμα) (σε χιλιάδες ευρώ) |  |  |  |
| 27 Κόστος προσωπικού IT (ετήσιο συνολικό μικτό κόστος) – Μικτός μισθός x 14 + Εργοδοτικές εισφορές |  |  |  |

28. Πόσα άτομα δουλεύουν στο τμήμα πληροφορικής; ………………………….

29. Κατά μέσο όρο πόσες ώρες εβδομαδιαία συνολικά δαπανούνται από τα άτομα του τμήματος IT για την επίλυση δυσκολιών χρήσης του Office (απορίες σχετικά με word, excel, ppt, access)*? Παρακαλούμε γράψτε προσεγγιστικά τον συνολικό αριθμό ωρών την εβδομάδα. ……………………………………………………………………..*

30. Ποια είναι τα πιο συνήθη ερωτήματα που λαμβάνει το τμήμα IT σχετικά με τις λειτουργίες του office (word, excel, ppt, access)?

In Annex 2, a graphical representation of candidates' perceptions on the value of ECDL training and certification is provided for each application.

**Specifically on WORD, candidates reported after ECDL training and certification:**



My knowledge in word is sufficient after the training & certification I received

| | |
|---|---|
| Disagree | 4,8 |
| Partially disagree | 4,8 |
| Neither agree nor agree | 14,3 |
| Partially agree | 23,8 |
| Agree | 52,4 |



My efficiency in word has increased after the training & certification I received

| | |
|---|---|
| Disagree | 9,5 |
| Partially disagree | |
| Neither agree nor agree | 9,5 |
| Partially agree | 23,8 |
| Agree | 57,1 |



I use most of what I learned during the training in my work

| | |
|---|---|
| Disagree | 9,5 |
| Partially disagree | 9,5 |
| Neither agree nor agree | 9,5 |
| Partially agree | 23,8 |
| Agree | 47,6 |

## Training and certification in Word improved my job satisfaction



| | Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|---|
| Value | 9,5 | | 9,5 | 19 | 61,9 |

## Training in word improved my working relations with my colleagues



| | Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|---|
| Value | 14,3 | 4,8 | 52,4 | 9,5 | 19 |
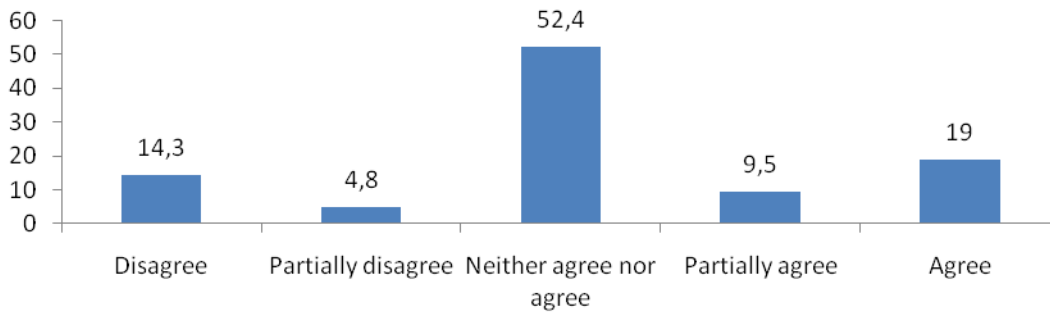
## Training and certification in word strengthened my corporate loyalty
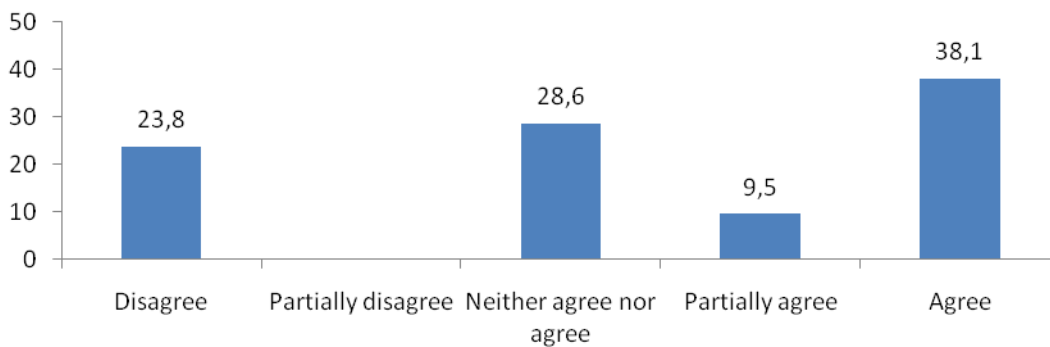


| | Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|---|
| Value | 23,8 | | 28,6 | 9,5 | 38,1 |

74

## Training and certification in word improved my employability in the labor market

| | | | | |
|---|---|---|---|---|
| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
| 14,3 | 4,8 | 14,3 | 23,8 | 42,9 |

## Training and certification in word improved my career prospects within the organization

| | | | | |
|---|---|---|---|---|
| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
| 19 | 4,8 | 23,8 | 19 | 33,3 |

## I am satisfied from both training and certification I received in word

| | | | | |
|---|---|---|---|---|
| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |

I need further training in WORD

| | Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|---|
| | 20 | 15 | 20 | 25 | 20 |



In which of the following do you wish to get further training and certification?

| | EXCEL | PPT | ACCESS | INTERNET |
|---|---|---|---|---|
| | 66,7 | 61,9 | 23,8 | 23,8 |
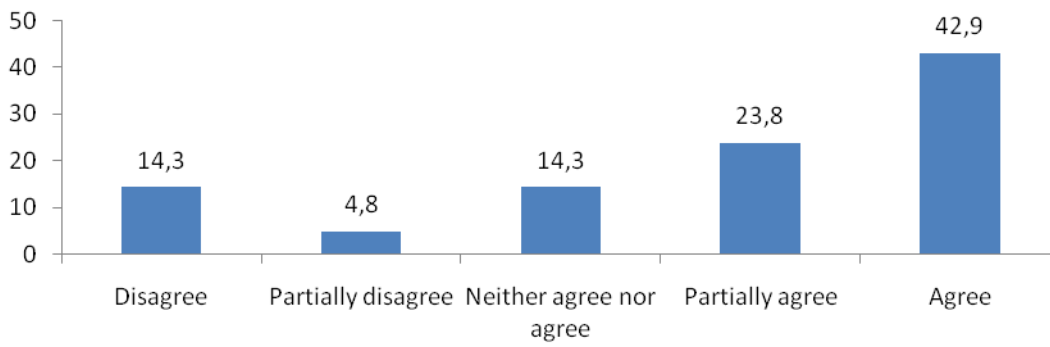
**Concerning EXCEL, candidates perceptions after ECDL training and certification:**

**can be presented in the following graphs:**

## My knowledge in EXCEL is sufficient after the training & certification I received

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|
| 6,4 | 2,1 | 4,3 | 38,3 | 48,9 |

## My efficiency in EXCEL has increased after the training & certification I received

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|
| | 6,4 | 6,4 | 21,3 | 66 |

## I use most of what I learned during the training In my work

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|
| | 6,4 | 10,6 | 34 | 48,9 |

## Training and certification in EXCEL improved my job satisfaction

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|
| | 4,3 | 12,8 | 31,9 | 51,1 |

## Training in EXCEL improved my working relations with my colleagues

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|
| 6,4 | 4,3 | 42,6 | 23,4 | 23,4 |

## Training and certification in EXCEL strengthened my corporate loyalty

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|
| 6,4 | 2,1 | 36,2 | 23,4 | 31,9 |

**Training and certification in EXCEL improved my employability in the labor market**

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|-------------------|------------------------|-----------------|-------|
| 2,1 | 2,1 | 14,9 | 21,3 | 59,6 |



**Training and certification in EXCEL improved my career prospects within the organization**

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|-------------------|------------------------|-----------------|-------|
| 2,1 | 4,3 | 31,9 | 31,9 | 29,8 |



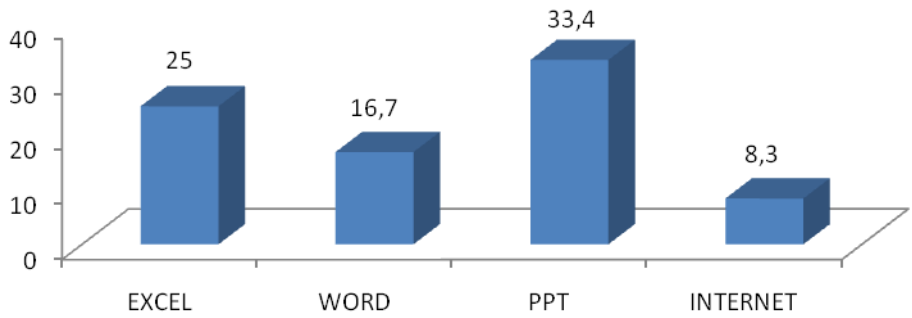**I am satisfied from both training and certification I received in EXCEL**

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|-------------------|------------------------|-----------------|-------|
| 4,3 | 6,4 | 4,3 | 23,4 | 61,7 |

I need further training in EXCEL

| | Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|---|
| Value | 14,9 | 10,6 | 31,9 | 29,8 | 12,8 |



In which of the following do you wish to get further training and certification?

| | PPT | WORD | ACCESS | INTERNET |
|---|---|---|---|---|
| Value | 44,7 | 38,3 | 38,3 | 19,1 |

**Moving forward to POWERPOINT, candidates reported after ECDL training and certification:**



My knowledge in powerpoint is sufficient after the training & certification I received

- Disagree: 6,4
- Partially disagree: 2,1
- Neither agree nor agree: 4,3
- Partially agree: 38,3
- Agree: 48,9



My efficiency in powerpoint has increased after the training & certification I received

- Disagree:
- Partially disagree: 3,4
- Neither agree nor agree: 6,9
- Partially agree: 20,7
- Agree: 69



I use most of what I learned during the training In my work

- Disagree: 3,3
- Partially disagree:
- Neither agree nor agree: 13,3
- Partially agree: 23,3
- Agree: 60

Training and certification in Powerpoint improved my job satisfaction
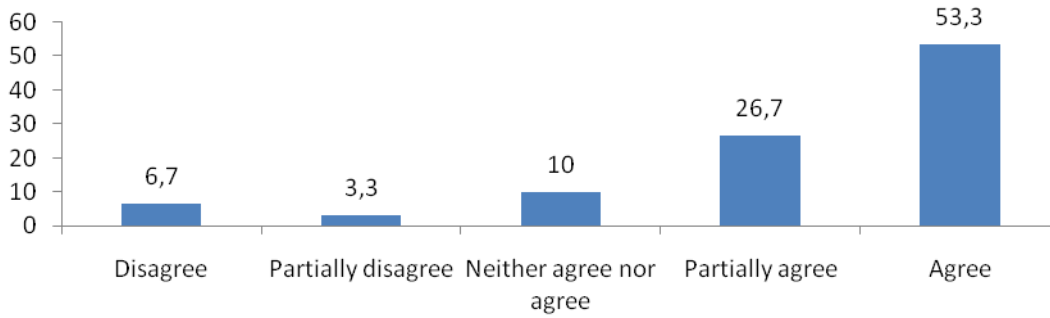


Training in powerpoint improved my working relations with my colleagues
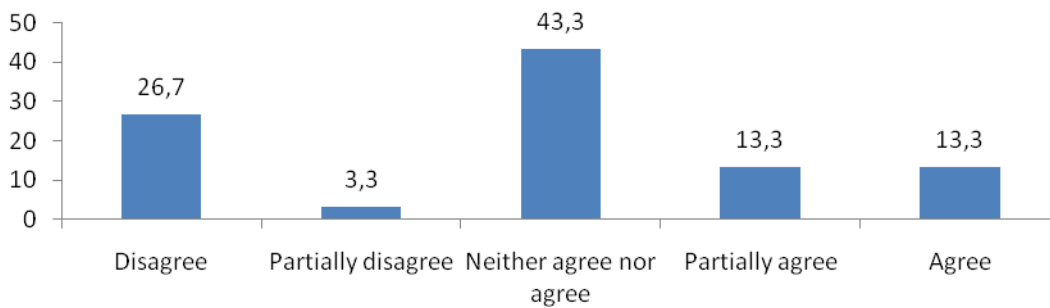


Training and certification in powerpoint strengthened my corporate loyalty
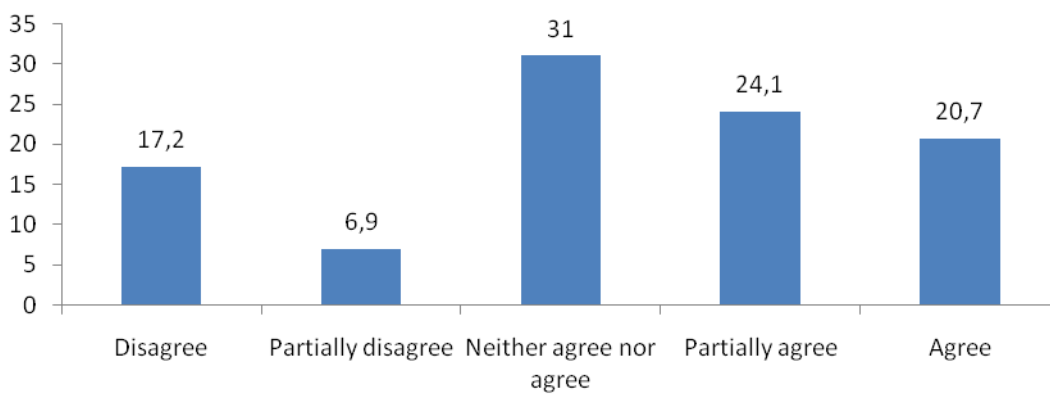
Training and certification in powerpoint improved my employability in the labor market
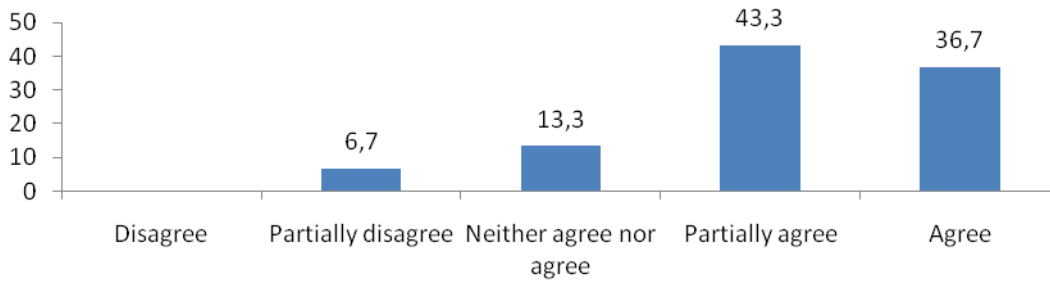


Training and certification in PPT improved my career prospects within the organization
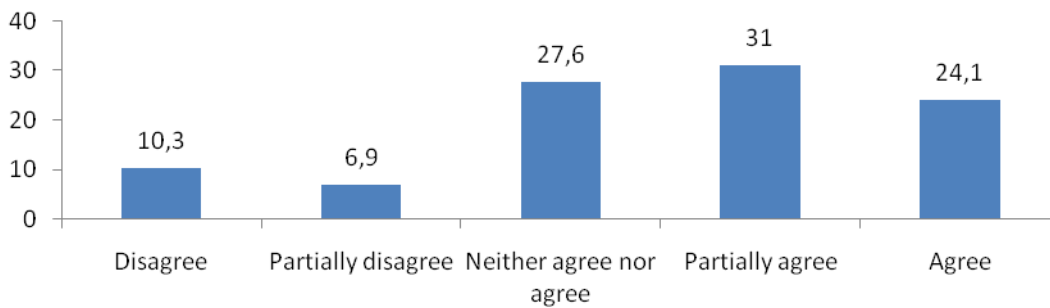


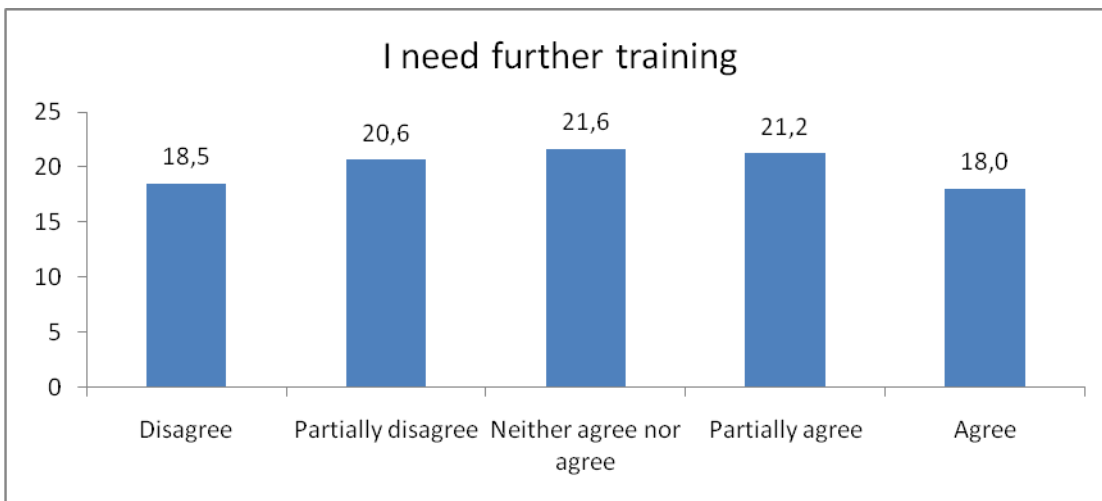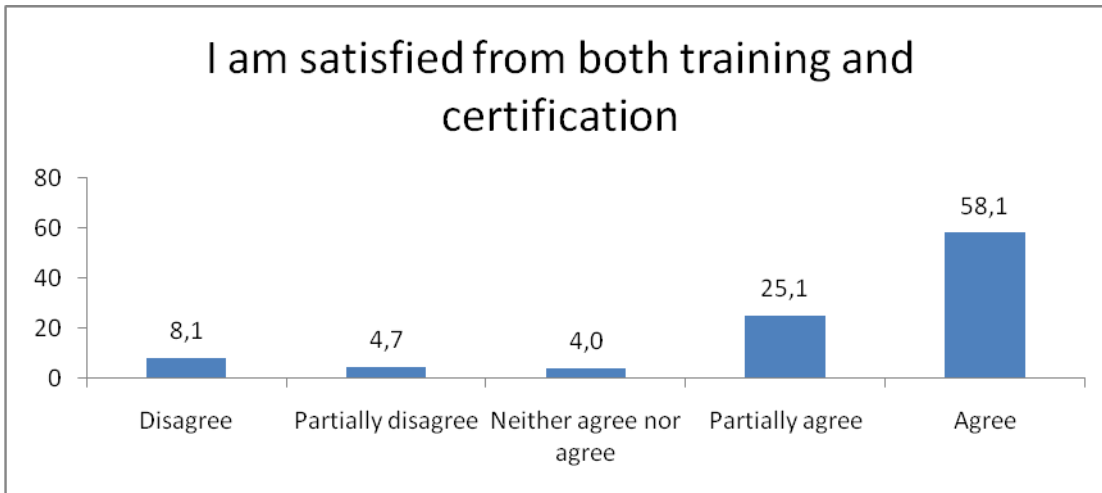I am satisfied from both training and certification I received in powerpoint
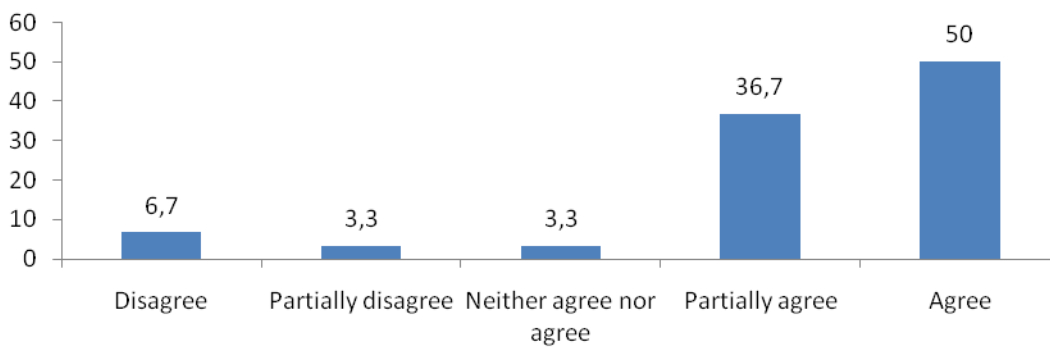
**I need further training in PPT**
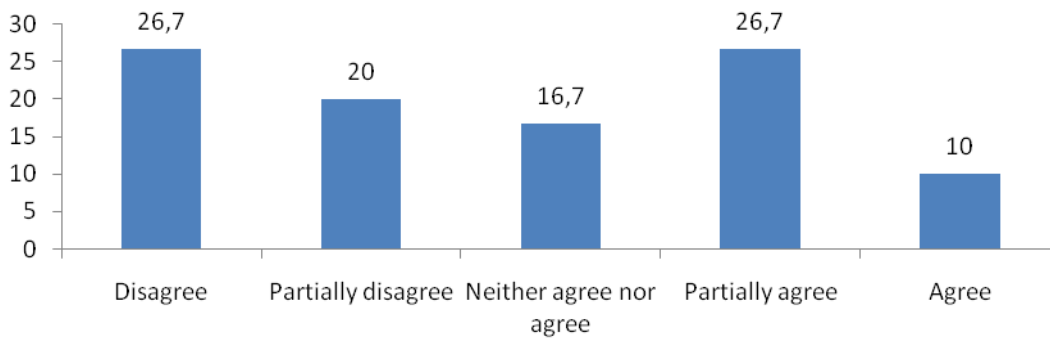
| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|--------------------|--------------------------|-----------------|-------|
| 26,7 | 20 | 16,7 | 26,7 | 10 |



**In which of the following do you wish to get further training and certification?**

| EXCEL | WORD | ACCESS | INTERNET |
|-------|------|--------|----------|
| 73,3 | 33,3 | 20 | 23,3 |
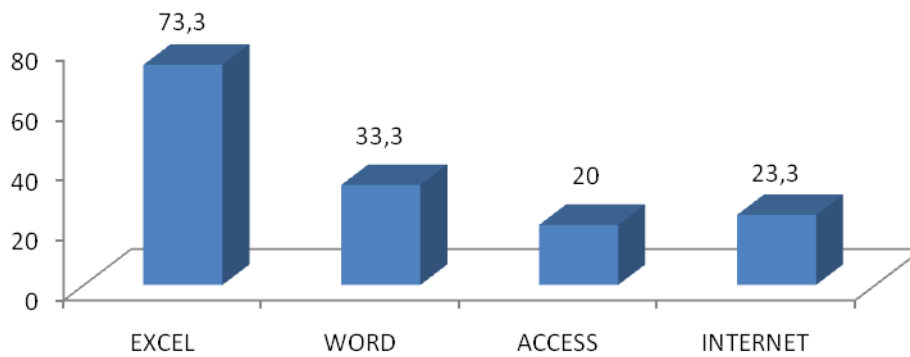
**As far as ACCESS is concerned, candidates reported after ECDL training and certification:**



My knowledge in access is sufficient after the training & certification I received

| | |
|---|---|
| Disagree | 0 |
| Partially disagree | 8,3 |
| Neither agree nor agree | 0 |
| Partially agree | 41,7 |
| Agree | 50 |



My efficiency in access has increased after the training & certification I received

| | |
|---|---|
| Disagree | 8,3 |
| Partially disagree | 8,3 |
| Neither agree nor agree | 8,3 |
| Partially agree | 8,3 |
| Agree | 66,7 |



I use most of what I learned during the training In my work

| | |
|---|---|
| Disagree | 8,3 |
| Partially disagree | 0 |
| Neither agree nor agree | 25 |
| Partially agree | 25 |
| Agree | 41,7 |

## Training and certification in access improved my job satisfaction

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|--------------------|--------------------------|-----------------|-------|
| 16,7 | | 16,7 | 16,7 | 50 |

## Training in powerpoint improved my working relations with my colleagues

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|--------------------|--------------------------|-----------------|-------|
| 16,7 | 8,3 | 33,3 | 8,3 | 33,3 |

## Training and certification in access strengthened my corporate loyalty
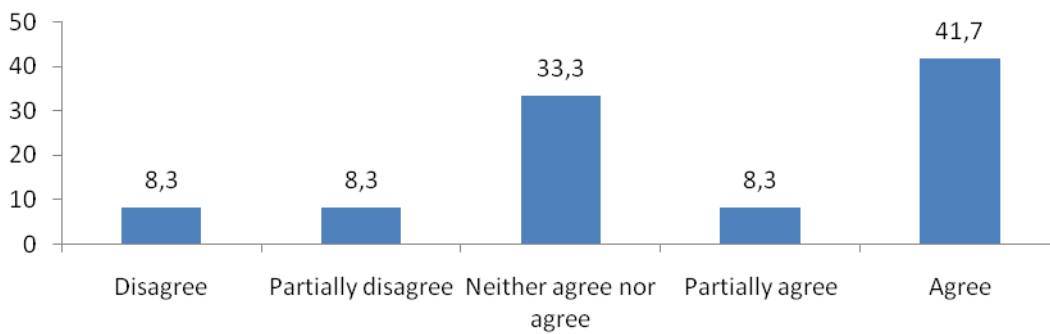
| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|--------------------|--------------------------|-----------------|-------|
| 8,3 | 8,3 | 33,3 | 8,3 | 41,7 |

## Training and certification in access improved my employability in the labor market

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|-------------------|------------------------|-----------------|-------|
| 8,3 | 8,3 | 16,7 | 8,3 | 58,3 |

## Training and certification in ACCESS improved my career prospects within the organization

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|-------------------|------------------------|-----------------|-------|
| | 16,7 | 16,7 | 25 | 41,7 |

## I am satisfied from both training and certification I received in access

| Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|----------|-------------------|------------------------|-----------------|-------|
| 8,3 | | | 25 | 66,7 |

I need further training in ACCESS

| | Disagree | Partially disagree | Neither agree nor agree | Partially agree | Agree |
|---|---|---|---|---|---|
| % | 16,7 | 41,7 | | 8,3 | 33,3 |



In which of the following do you wish to get further training and certification?

| | EXCEL | WORD | PPT | INTERNET |
|---|---|---|---|---|
| % | 25 | 16,7 | 33,4 | 8,3 |

**On average, candidates reported after ECDL training and certification:**



I am satisfied from both training and certification

| | |
|---|---|
| Disagree | 8,1 |
| Partially disagree | 4,7 |
| Neither agree nor agree | 4,0 |
| Partially agree | 25,1 |
| Agree | 58,1 |



I need further training

| | |
|---|---|
| Disagree | 18,5 |
| Partially disagree | 20,6 |
| Neither agree nor agree | 21,6 |
| Partially agree | 21,2 |
| Agree | 18,0 |



In which of the following do you wish to get further training and certification?

| | |
|---|---|
| EXCEL | 31,1 |
| WORD | 16,6 |
| PPT | 26,4 |
| ACCESS | 15,5 |
| INTERNET | 10,5 |

In Annex 3, a graphical representation of supervisors' perceptions on the value of ECDL training and certification is provided for each application.

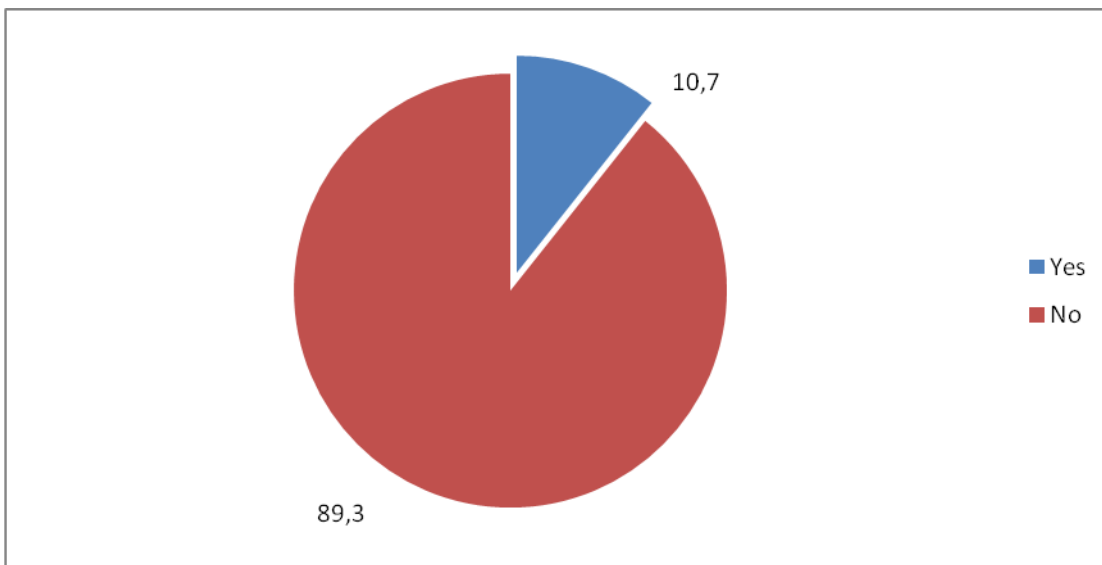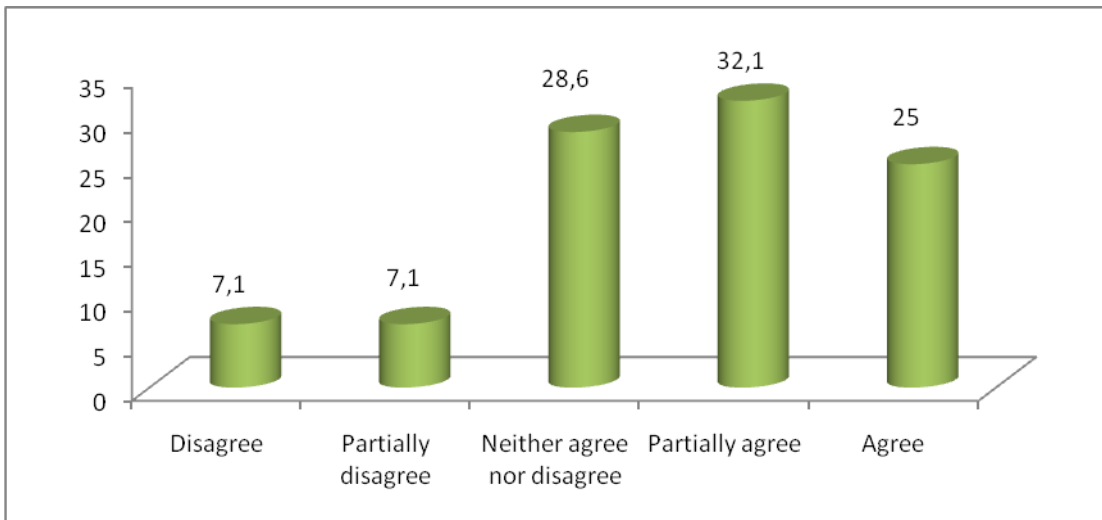Specifically on **WORD**, supervisors reported after ECDL training and certification:

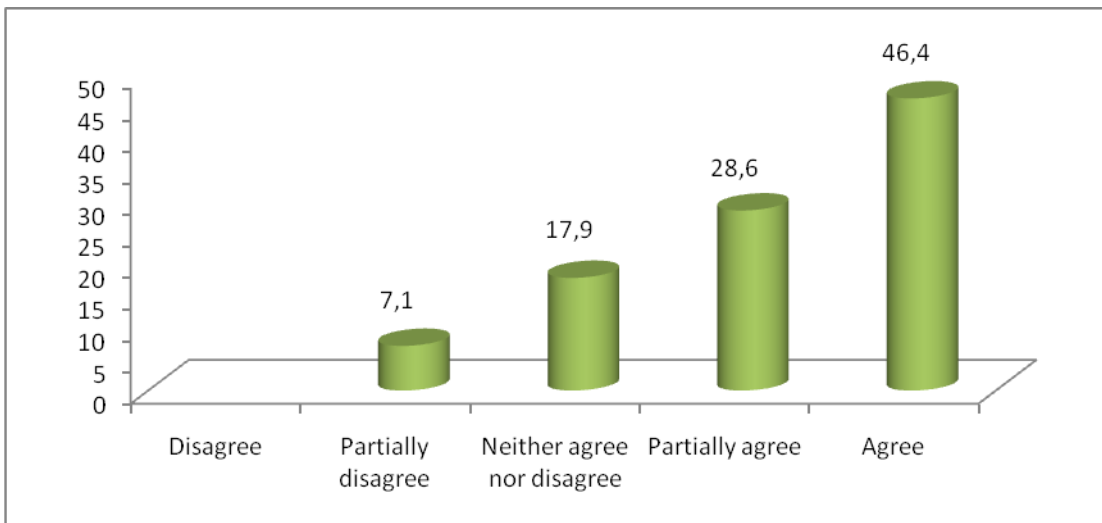**The employee has shown improvement in the following when using word:**
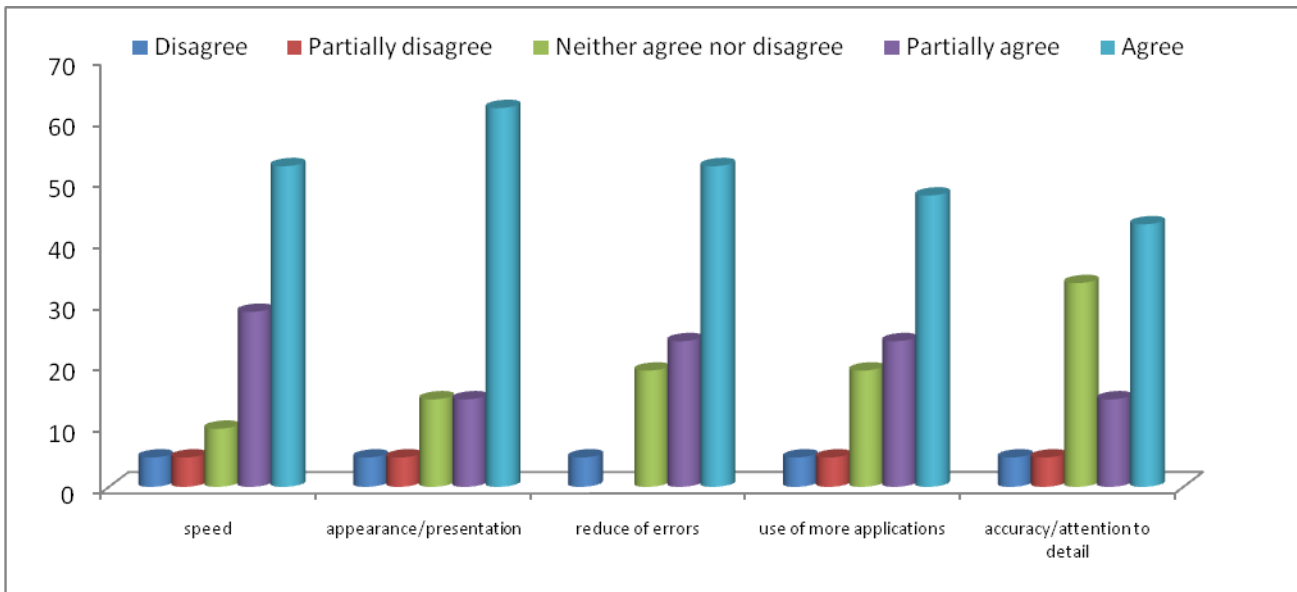


**After the training and certification has the employee asked for your help to solve difficulties in word?**
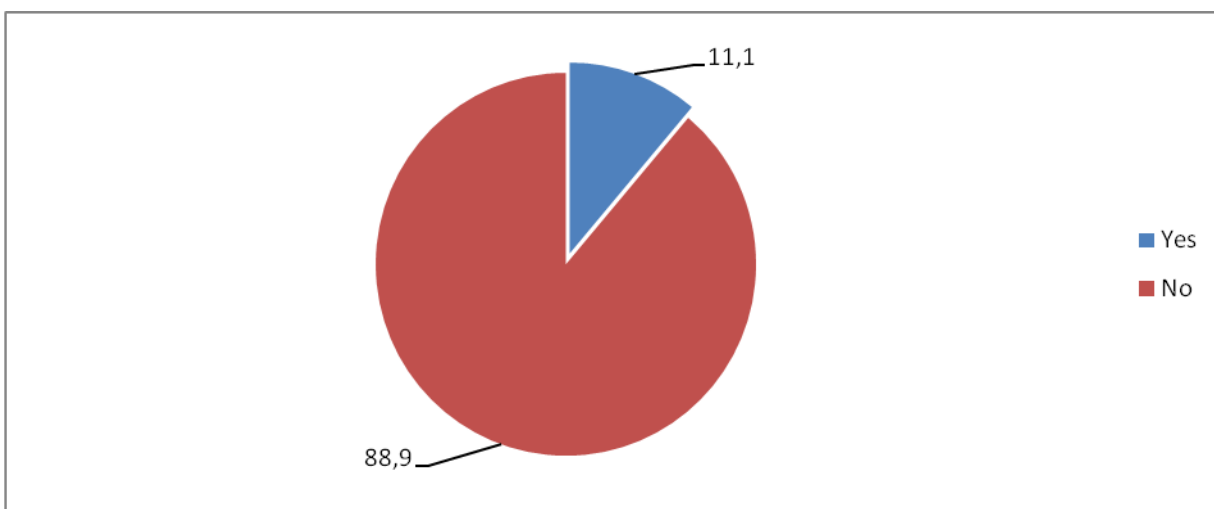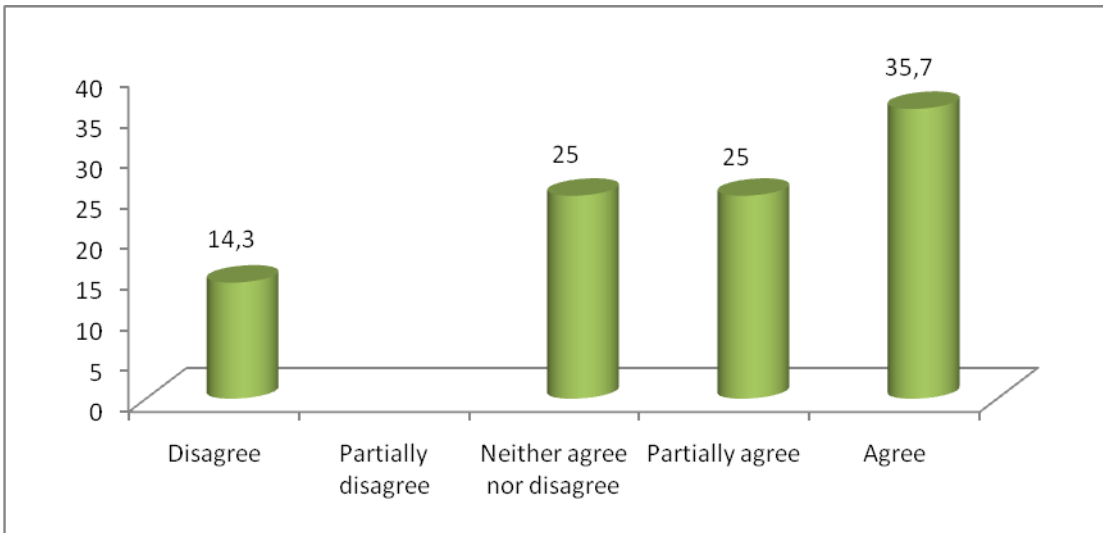
**After the training the employee has better career potential within the organization**
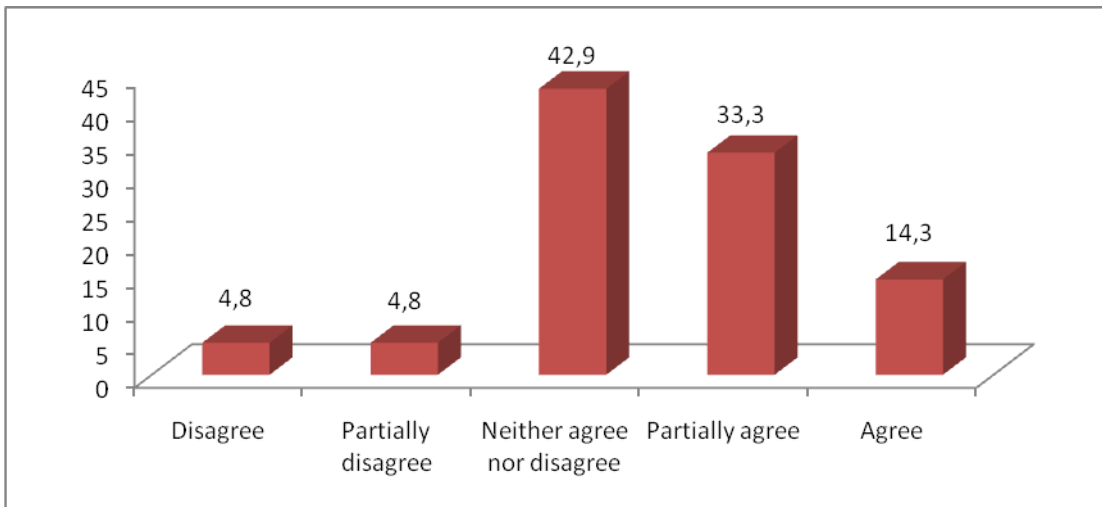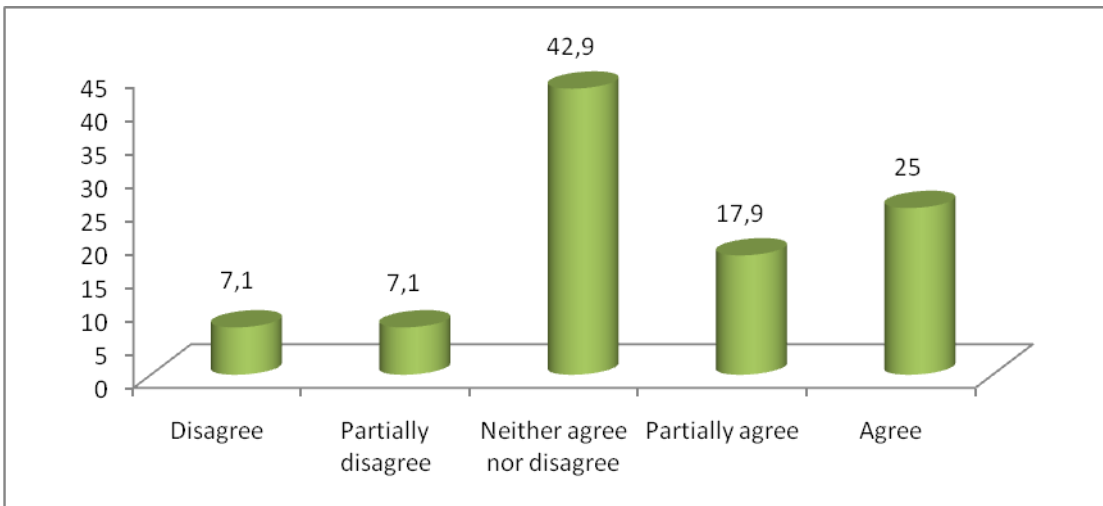


**After the training the employee has improved his/her employability in the labor market**
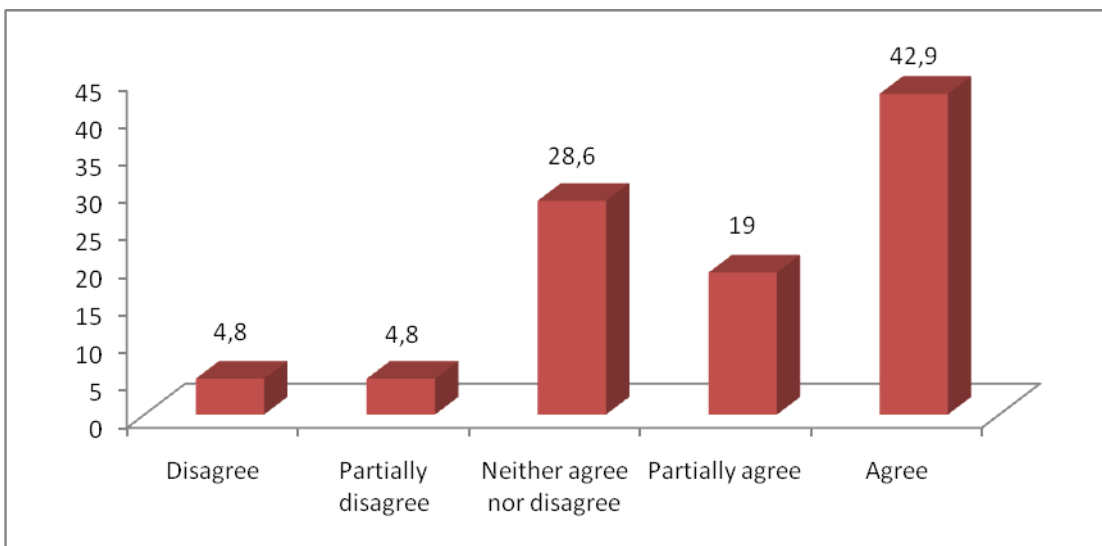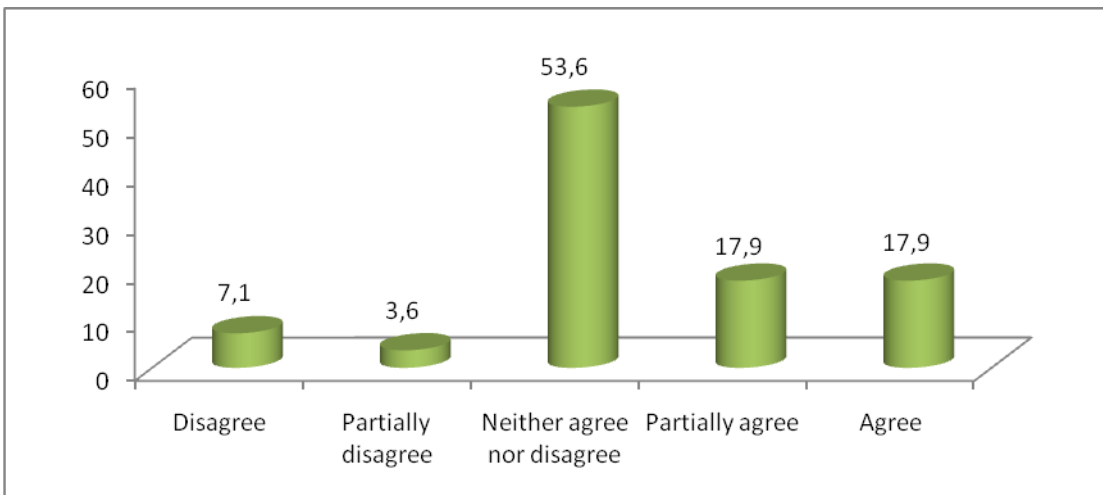


**The last month I have noticed some improvement in the working satisfaction of the specific employee**
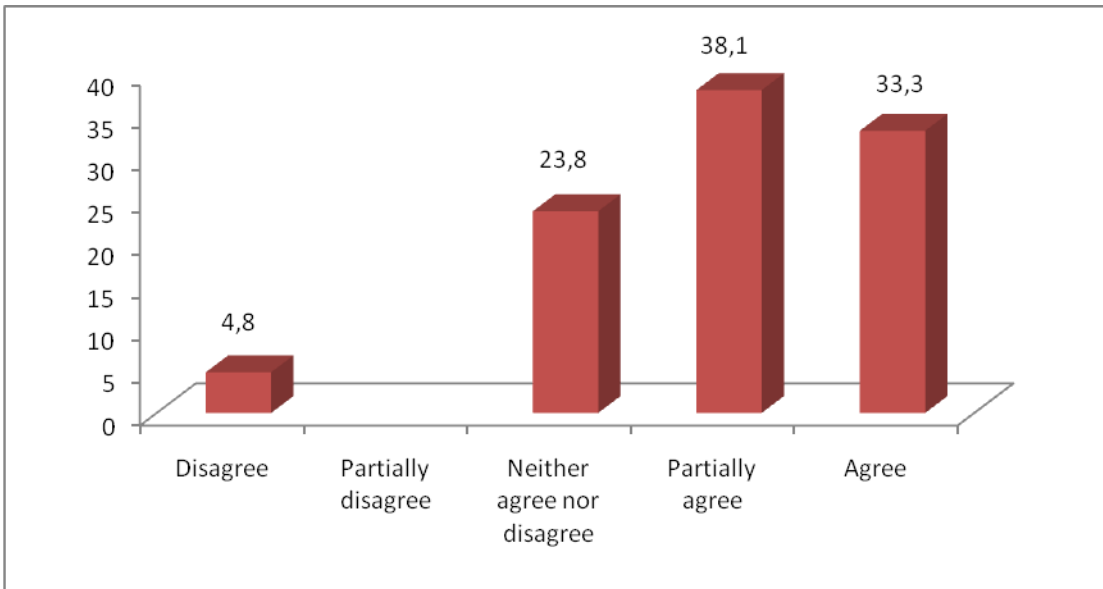
**The last month I have noticed some improvement in the employee's working relations with his/her colleagues**
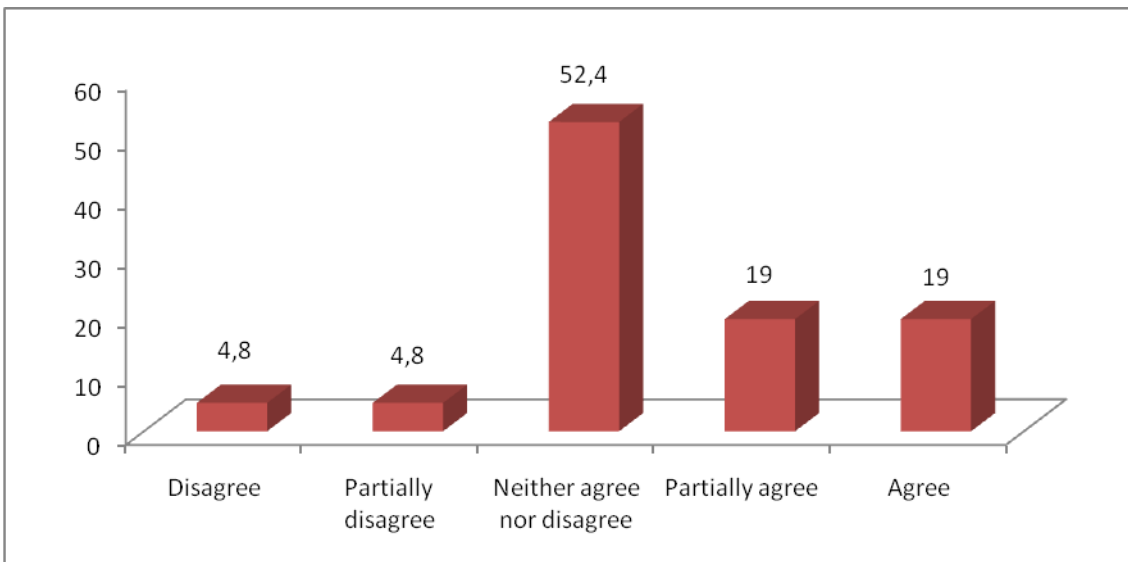


**The last month I have noticed some improvement at the employee's corporate loyalty**
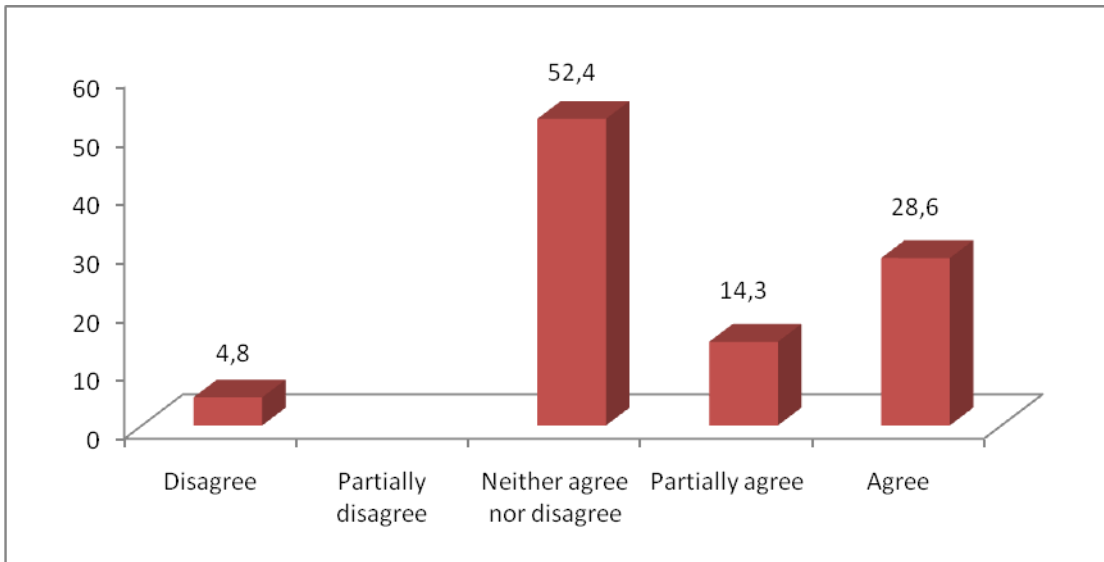
Concerning **EXCEL**, supervisors reported after ECDL training and certification:

**The employee has shown improvement in the following when using excel:**
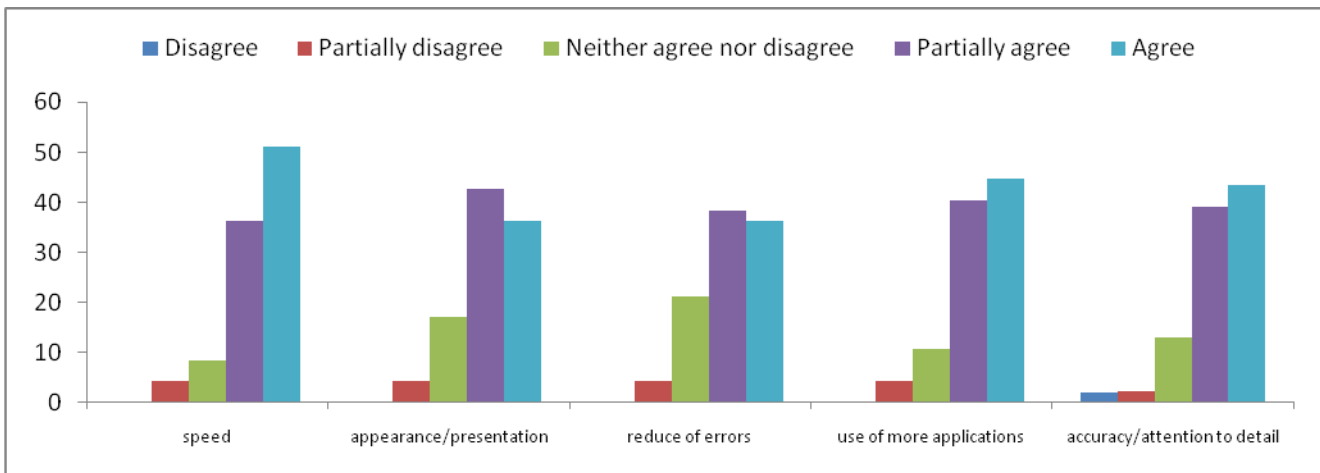


**After the training and certification has the employee asked for your help to solve difficulties in excel?**
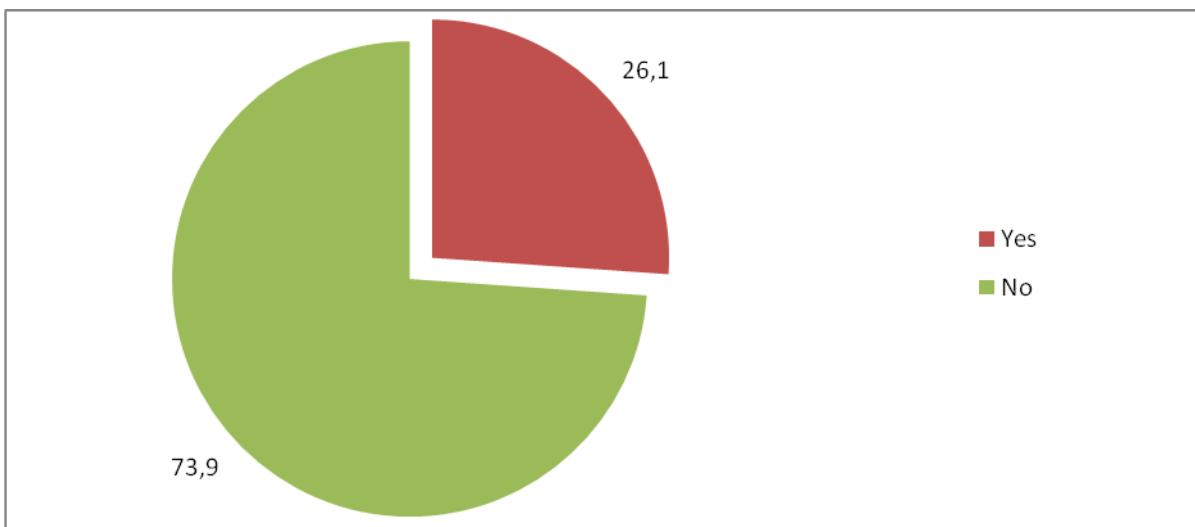
**After the training the employee has better career potential within the organization**
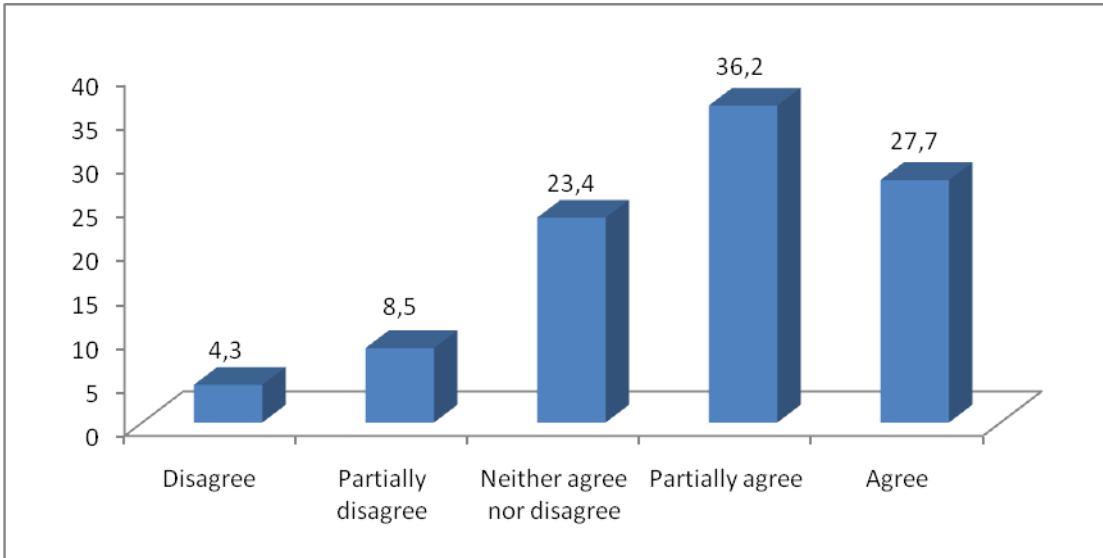


**After the training the employee has improved his/her employability in the labor market**
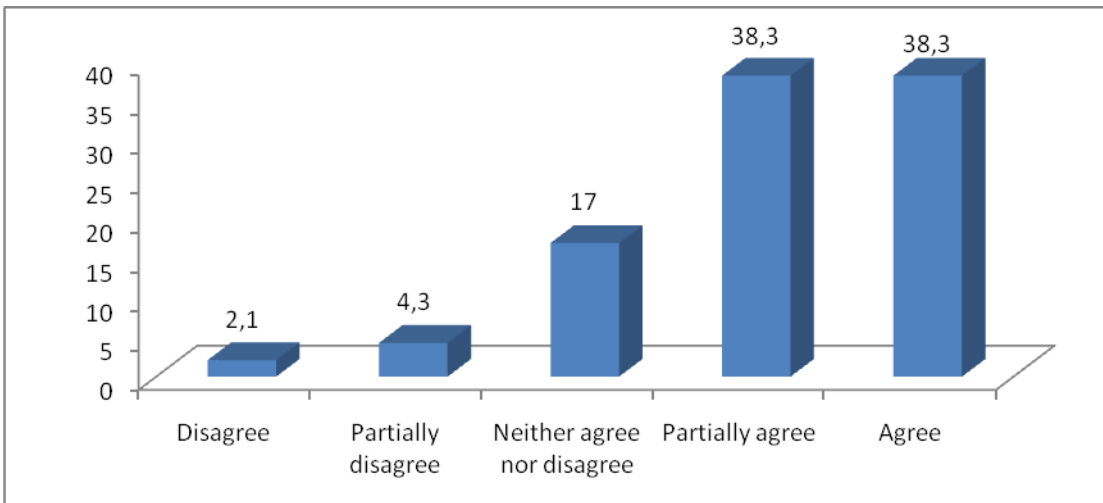


**The last month I have noticed some improvement in the working satisfaction of the specific employee**
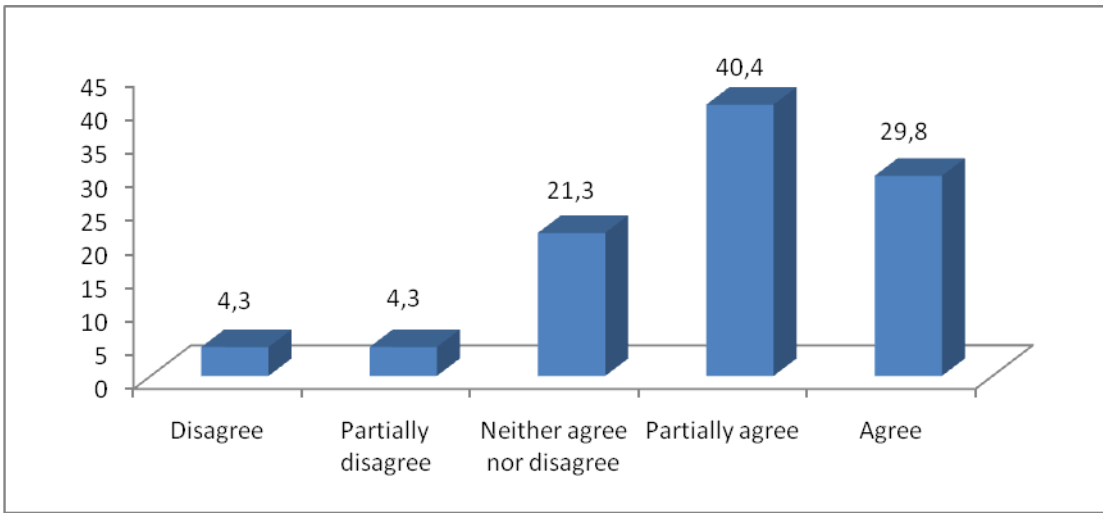
**The last month I have noticed some improvement in the employee's working relations with his/her colleagues**
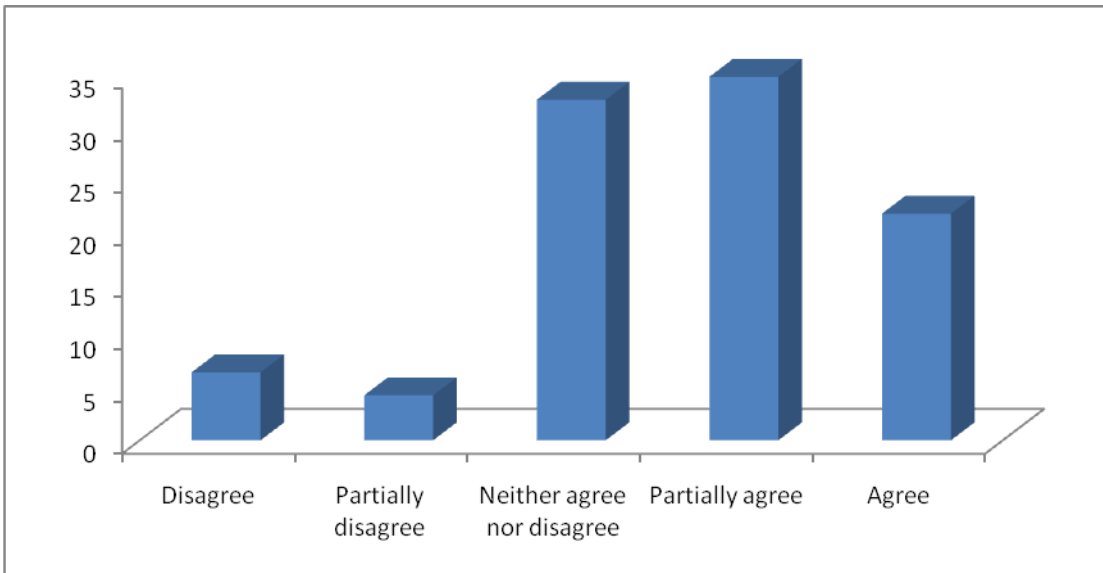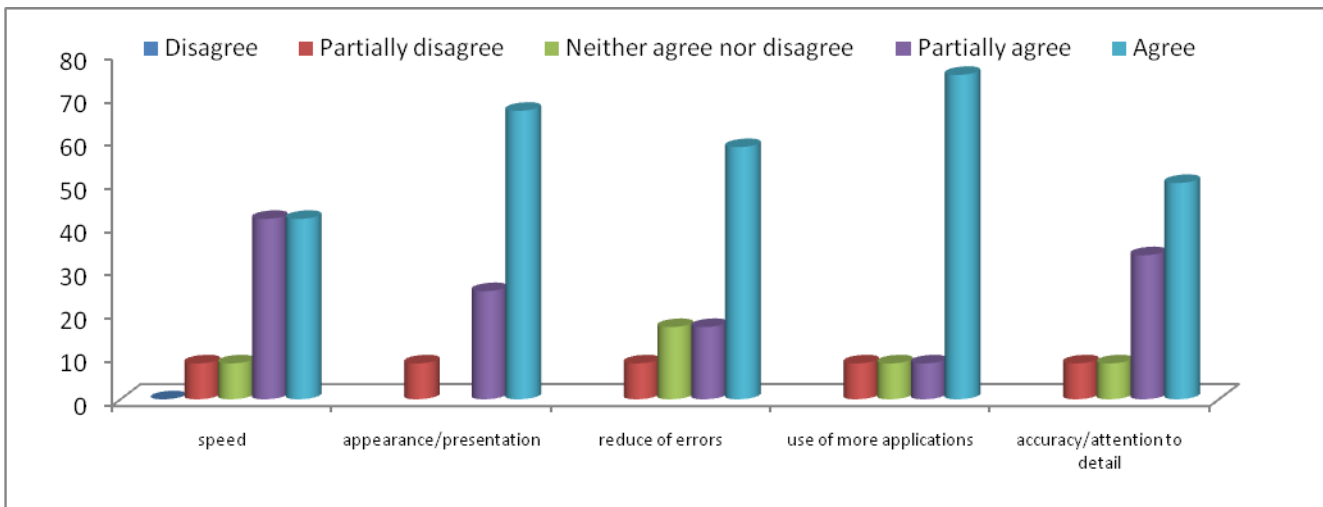


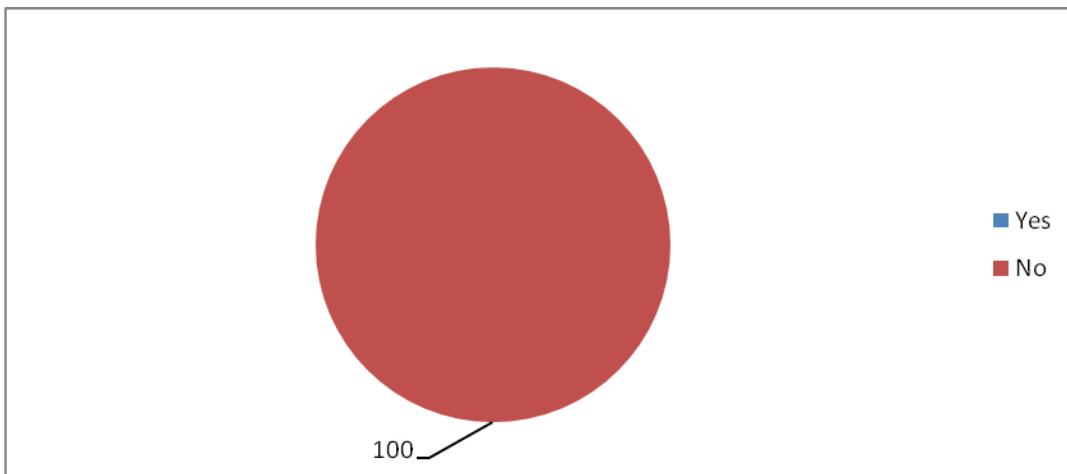**The last month I have noticed some improvement at the employee's corporate loyalty**
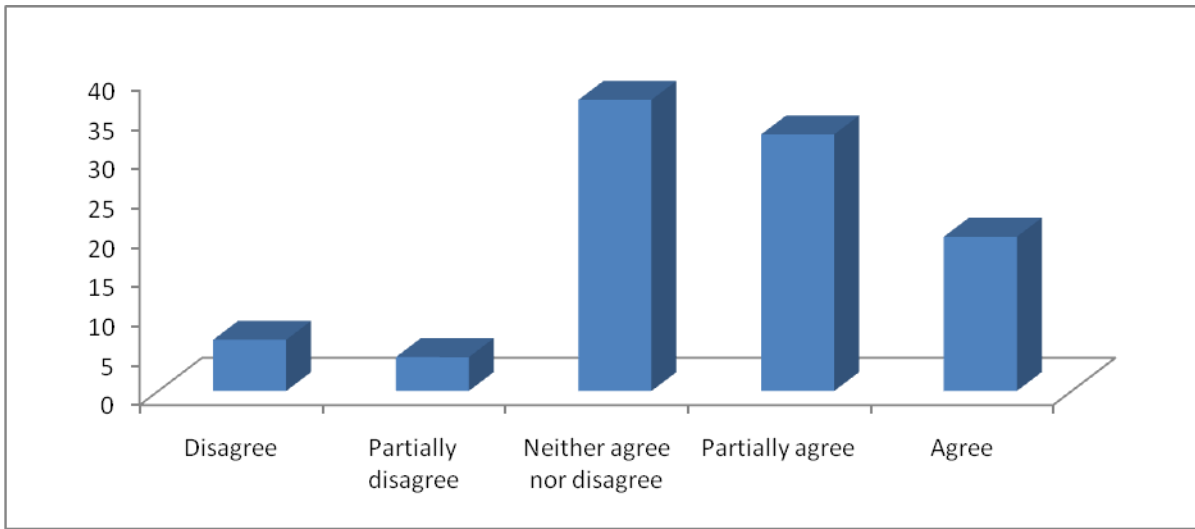
Moving to **POWERPOINT**, supervisors reported after ECDL training and certification:
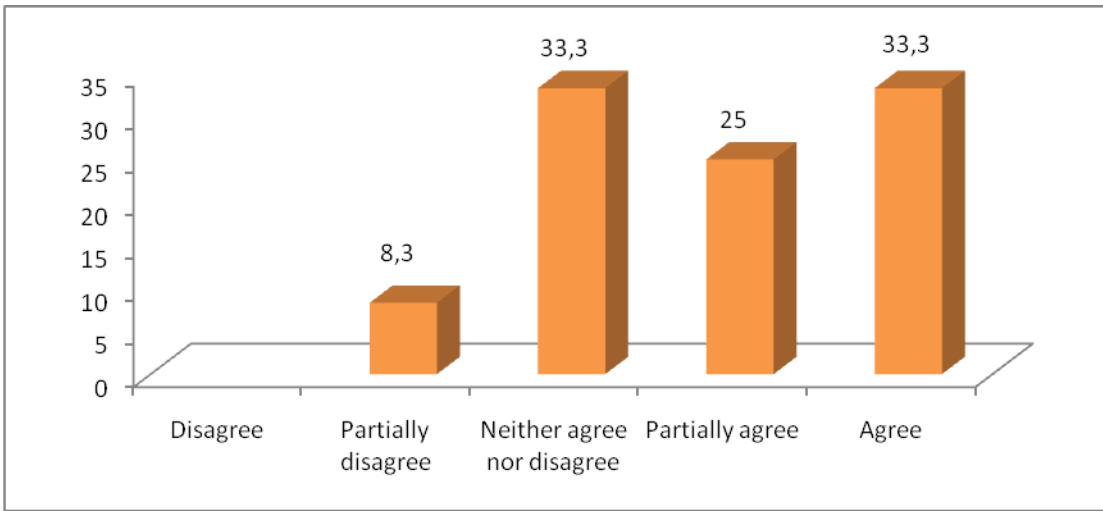
**The employee has shown improvement in the following when using PowerPoint:**
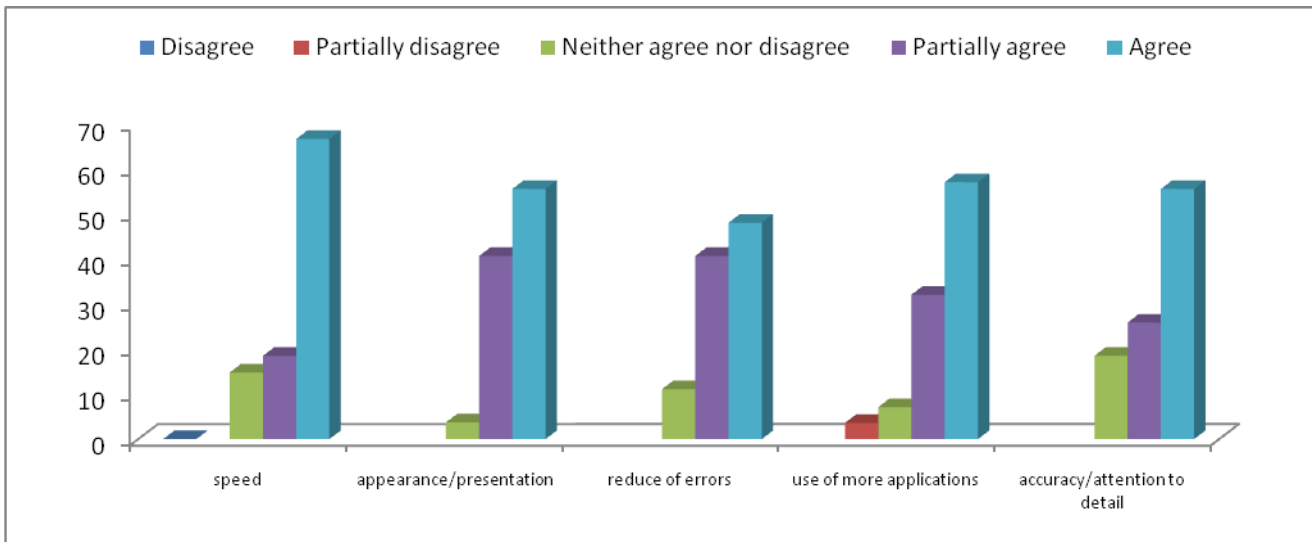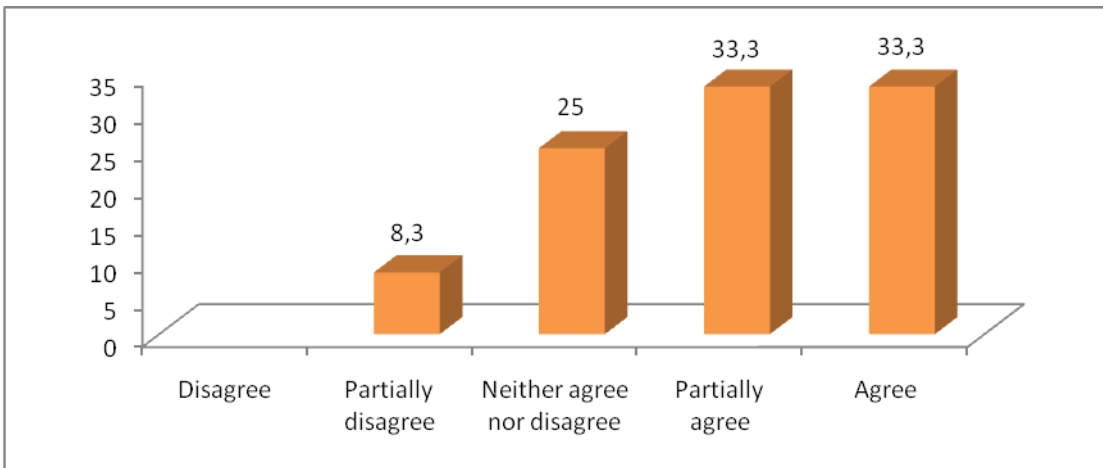


**After the training and certification has the employee asked for your help to solve difficulties in PowerPoint?**
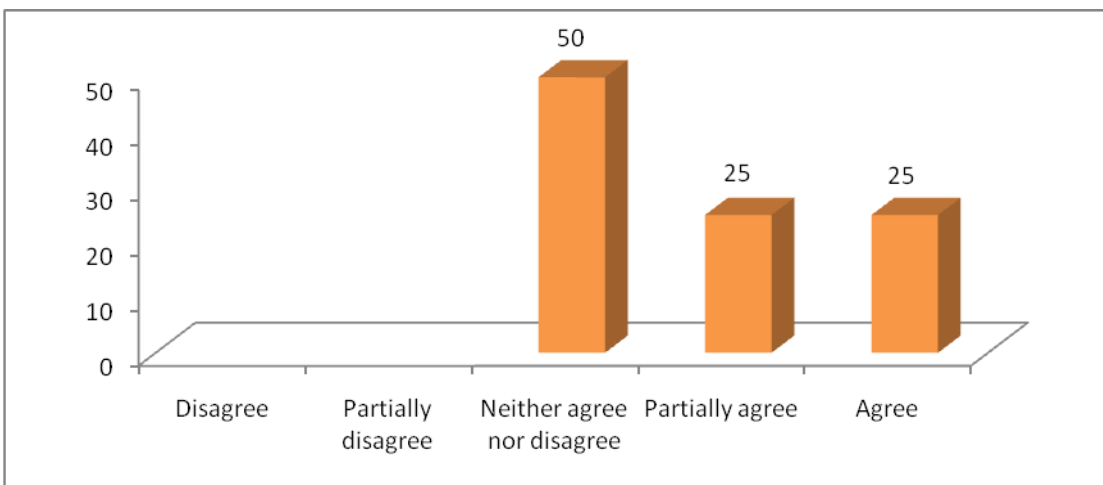
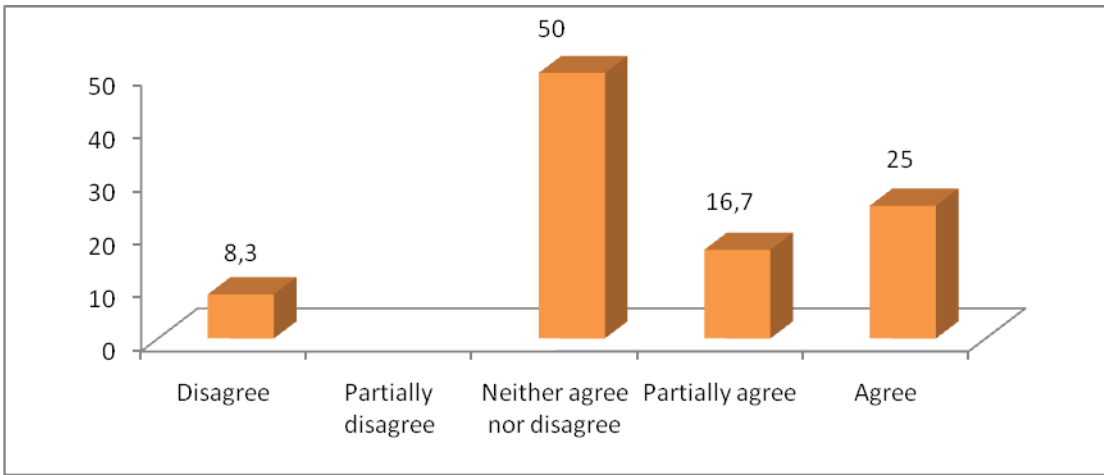**After the training the employee has better career potential within the organization**



**After the training the employee has improved his/her employability in the labor market**



**The last month I have noticed some improvement in the working satisfaction of the specific employee**

**The last month I have noticed some improvement in the employee's working relations with his/her colleagues**



**The last month I have noticed some improvement at the employee's corporate loyalty**

In **ACCESS**, supervisors' perceptions after ECDL training and certification are presented graphically in the following diagrams:

**The employee has been improved in the following when using access:**



**After the training and certification has the employee asked for your help to solve difficulties in access?**



**After the training the employee has better career potential within the organization**

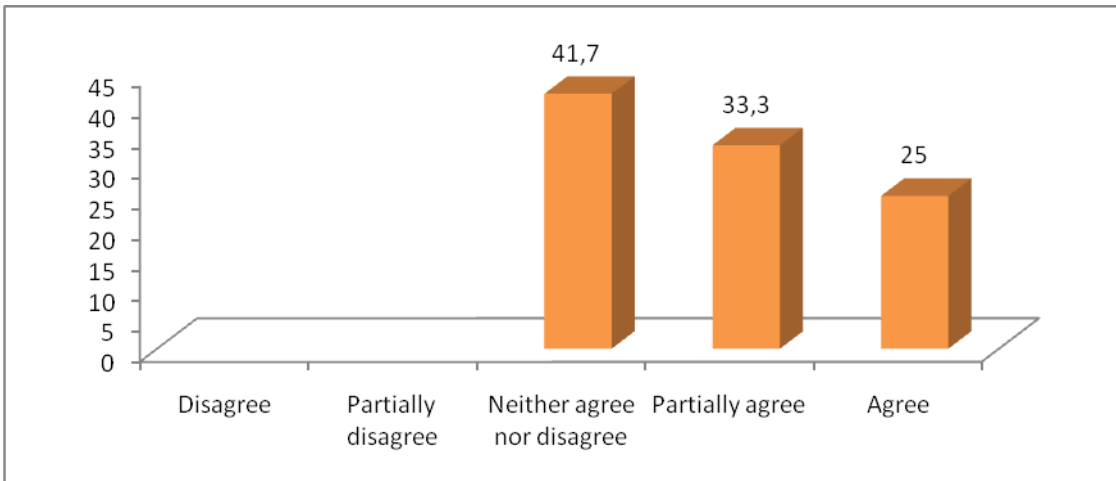**After the training the employee has improved his/her employability in the labor market**



**The last month I have noticed some improvement in the working satisfaction of the specific employee**
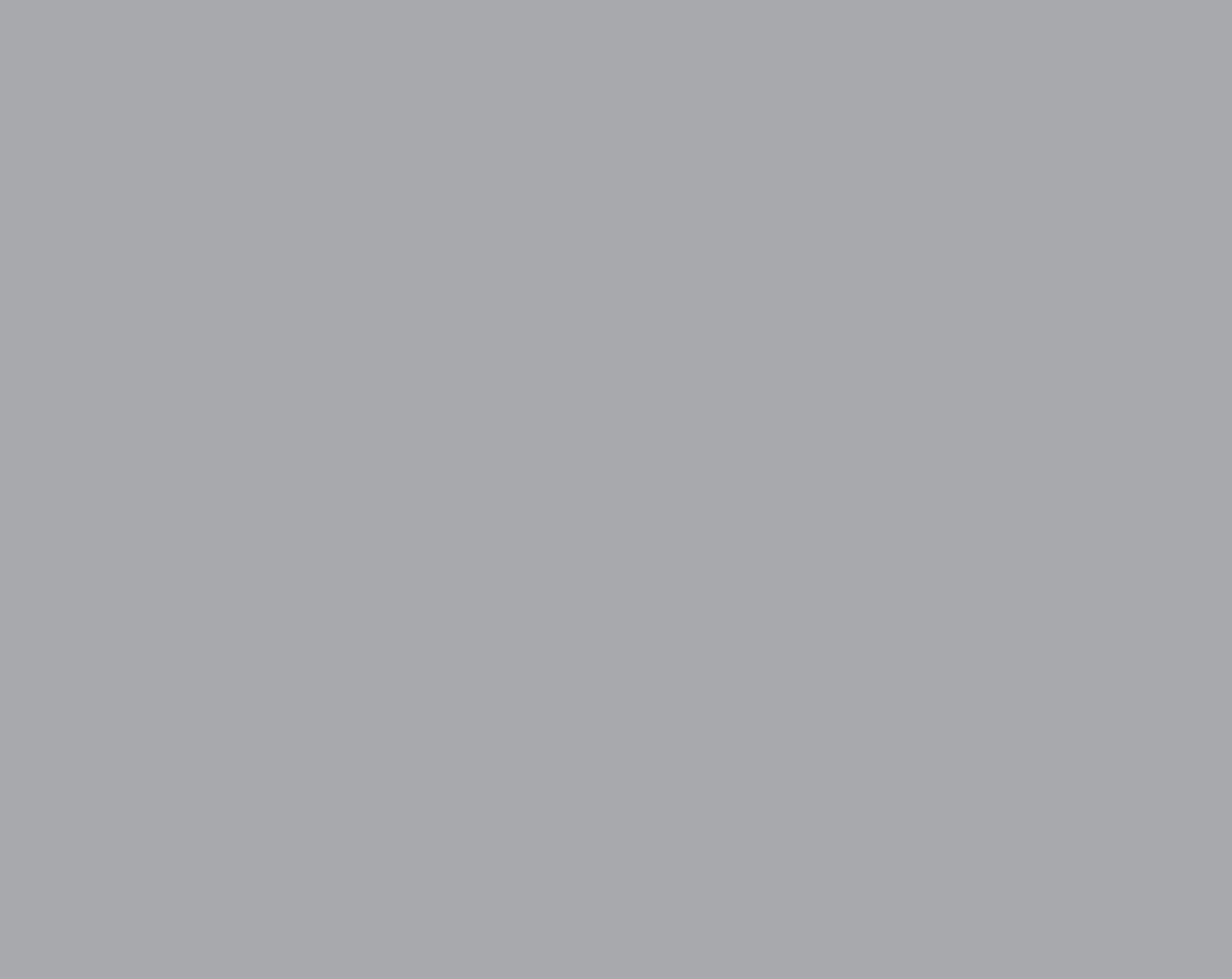


**The last month I have noticed some improvement in the employee's working relations with his/her colleagues**

**The last month I have noticed some improvement at the employee's corporate loyalty**